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The Harveian Oration

ON

1. THE MEDICINE AND THE MEDICINE GOD OF THE EGYPTIANS; CONTEMPORARY VIEWS OF THE CIRCULATION. 2. PREVENTION IN VALVULAR DISEASE.

Delivered before the Royal College of Physicians of London on June 21st, 1904,

BY RICHARD CATON, M.D. EDIN., F.R.C.P. LOND.,

CONSULTING PHYSICIAN TO THE LIVERPOOL ROYAL INFIRMARY; EMERITUS PROFESSOR OF PHYSIOLOGY, UNIVERSITY OF LIVERPOOL.

MR. PRESIDENT AND GENTLEMEN,—The officials, Fellows, and friends of this College assemble to-day, as we and our predecessors have assembled year by year for two and a half centuries, to commemorate the services which William Harvey has rendered to mankind and in order to keep alive in our own minds the wise counsels which he addressed to us, the memory of which he desired us ever to renew at the festival which he founded. We are to honour our great profession, to continue in mutual love and affection among ourselves, and to search and to study out the secrets of nature by way of experiment in order to prevent suffering and to ameliorate human life.

In commencing the pleasing duty which the kindness of our President has placed in my unworthy hands it is needful to comply with the desire of our founder that we commemorate the names of benefactors of this College. The lengthy and honourable roll was so fully dealt with by the learned orator of last year that I shall merely add to his recital the names of those who since that time have given of their substance for the advancement of medicine. Dr. Horace Dobell of Parkstone Heights, Dorset, gave the sum of £500 to encourage research into the ultimate origin, evolution, and life-history of bacilli and other pathogenic micro-organisms; Dr. George Oliver, Fellow of this College, of Harrogate, and Farnham, Surrey, has given £2000 to found the Oliver Sharpey lectureship or prize in memory of William Sharpey of University College and to encourage the application of physiological knowledge for the prevention and cure of disease and for the prolongation of life; and Lady Clark has presented to us a bust of our revered and lamented former President, Sir Andrew Clark.

No student of the works of Harvey can fail to bear in mind the great loss we have sustained this year in the decease of Sir Edward Sieveking who in his Harveian Oration drew special attention to the Prelectiones Anatomiæ and in conjunction with Dr. George Johnson and other Fellows of this College arranged for the admirable autotype reproduction of Harvey's manuscript which we possess.

Desiring to render this address as little wearisome as may be I propose to divide it into two parts: the first archæological, dealing with Egyptian medicine, the medicine god, and the earliest inquiries known to have been made concerning the circulation and circulatory diseases—viz., those of the physicians of ancient Egypt, a department of pre-Harveian work, and perhaps the only one, which has not been dealt with in this room. Secondly, I wish to speak with great brevity on the more practical subject of the preventive treatment of certain forms of circulatory disease.

EGYPT AND THE EARLIEST RESEARCHES ON THE CIRCULATION.

To all who love our venerable and beneficent profession the spectacle of our predecessors in early ages striving in darkness and difficulty to acquire that hidden knowledge to which we have partially attained is interesting and should awaken our sympathy. As was remarked by the learned Harveian orator of 1896: "The past is worth our study and ever more so the further we advance."

The information which archæological research has of late afforded, though in a fitful and partial manner, as to the earliest history of medicine, and particularly in regard to that department in which our founder laboured, is not unworthy of our attention.

The first evidence of definite inquiry, in any degree worthy to be called scientific by a body of men specially educated for, and devoting their lives to, medical service occurs in the early history of Egypt. The ability, learning, and artistic skill shown during the early dynasties, which all Egyptologists recognise, are paralleled by the remarkable interest then manifested in medicine. Works on anatomy and medicine are stated to have been written even by the early sovereigns of Egypt. Athothis, the son of Menes, who lived 6000 years ago, is stated in the Berlin papyrus to have written a book on medicine, and I shall soon have to quote from the anatomical writings of the Pharaoh Usaphais, one of his successors; Semti, the seventh monarch of the same dynasty, pursued similar investigations. It is clear that, like the Greeks, these men in the childhood of the world believed that ὑγιαίνειν μὲν ἄριστον ἐστιν, sanitation was to them the first of the sciences.

THE MEDICINE GOD I-EM-HOTEP.

During the third dynasty, about the year 3500 B.C. there lived a learned physician, probably a priest of Ra, the sun-god, the founder of a cult, whose eminence was such that in course of ages he is deified and becomes for later generations the special god of medicine. His temples were places of healing for the people. His name is I-em-hotep, meaning "he who cometh in peace." According to ancient inscriptions he was the son of a certain architect named Kanofer, but when raised in popular esteem to the rank of a demi-god he is called the son of the supreme god Ptah, the Hephaistos of Egypt, and he becomes one of the great god-triad of Memphis. I-em-hotep is described as the good physician of gods and men, a kind and merciful god, assuaging the sufferings of those in pain, healing the diseases of men, giving peaceful sleep to the restless and suffering; he is called the creative god who giveth life to all men, who comes unto them who call upon him in every place and who gives sons to the childless. He was great in magic and all learning. He and his followers had to do with the embalming of the body and he protected the soul of the dead man from all spiritual enemies after it had left the body. In the ritual of embalmment the dead man was encouraged by these words: "Thy soul uniteth itself to I-em hotep; while thou art in the funeral valley thy heart rejoiceth because thou dost not go into the dwelling of Sebek but thou art like a son in the house of his father."

From the testimony of temple inscriptions and papyri, as well as from the writings of Manetho, it is clear that the temple of the medicine god I-em-hotep was established first in early times at Memphis, and there his priests carried on the work of healing; similar temples were also erected elsewhere. I-em-hotep was represented in art as a bald-headed man, usually in a sitting posture, bearing on his knees an open papyrus scroll and holding in his hand the symbol of life. As the centuries and millenniums passed on his cult seems to have become more and more popular. In later times when Greek colonists appeared in Egypt they gave him the name Imouthes and applied to his temples the Greek term "Asklepieia," clearly regarding him as alike in kind to the Greek Asklepios and his temples as hospitals for the sick. The great temple stood outside the eastern wall of Memphis close to the Serapeum. Some of us who are present to-day when visiting the site of the temple of I-em-hotep have naturally been impressed by the thought that on this spot, long before Asklepios, or Hippocrates, commonly called the father of medicine, was born, probably before the Homeric poems were written, before the Israelites were in Egypt, before the Stone Age had passed, learned men devoted themselves to the consideration of the nature of human life, strove to prolong it, to assuage suffering, and to cure disease. They studied and treated many of the ailments familiar to us, such as tubercle, leprosy, plague, anæmia, and other diseases prevalent in Egypt to-day. Near the site of this temple, securely sealed in an earthen vessel which had been hidden in the sand, was found one of the medical papyri from which I shall quote some passages; doubtless it belonged to an early physician who sought, perhaps during the invasion of Ethiopian or other barbarians, to preserve for mankind the precious knowledge that seemed in danger of extinction.

NECROPSIES MADE BY THE EGYPTIAN PRIESTS.

It is of some interest to note that these priests of I-em-hotep, themselves learned men, not only saw and

prescribed daily for vast numbers of sick persons but also performed innumerable necropsies. They removed the heart, large blood-vessels, viscera, and brain from the bodies of deceased persons, also from the bodies of sacred animals, prior to embalmment; the heart was placed in a separate jar by itself and the remainder of the viscera in a larger vessel; thus these men had an opportunity of learning something of anatomy; they may have gained some insight into the intricate problem of the action of the heart, the movement of the blood, and the changes of heart and vessels produced by disease; no nation of antiquity had such opportunities. Did they discover anything? I think I can demonstrate to you they did obtain a partial knowledge of the circulation; they did not solve the problem but they approached it as nearly as did the Greeks, and probably from them the Greeks obtained such knowledge as they possessed in early times.

REFERENCES TO THE CIRCULATION IN THE MEDICAL PAPYRI.

Certain of the contents of the medical papyri are at present almost incomprehensible on account of the difficulty of translating technical terms; these parts I shall not refer to at all; those portions which are more easily understood still present difficulties and translations must necessarily be free and at times vague. Where the sense is important I have had the help of one or two of the most learned living Egyptologists and here I must express my acknowledgments to Dr. Budge, Professor Kurt Sethe, Dr. Brugsch, Dr. Joachim, Dr. Leemans, Dr. Withington, Dr. Sandwich, Mr. Garstang, Professor Carrington Bolton, and others for help orally or from their writings without which, in my ignorance, I should have done little. Let me read you one or two extracts from the work of the Pharaoh Usaphais quoted in Ebers's papyrus: "Man hath 12 vessels proceeding from his heart which extend to his body and limbs, two vessels go to the contents of his chest two vessels go to each leg, two to each arm, two vessels go to the back of the head, two to the front of the head, two branches go to the eyes, two to the nose, two vessels go to the right ear, the breath of life goes through them, two go to the left ear and through them passes the breath of death, they all proceed from the heart." The concluding sentence is the earliest example I know of the ancient superstition that the left side of the body is sinister and evil. This is very early anatomy, professing to be at least 6000 years old; we must not expect it to be quite accurate. Turning to a comparatively recent period the only copy existing of Ebers's papyrus (found in a tomb at Thebes) was written in or before the sixteenth century B.C. No doubt most, if not all, its contents are much older than that date. The passage which I am about to read commences thus: "From the secret book of the physician, a description of the action of the heart and of the heart itself. From the heart arise the vessels which go to the whole body; if the physician lays his finger on the head, on the neck, on the hand, on the epigastrium, on the arm or the leg, everywhere the motion of the heart touches him, coursing through the vessels to all the members" [the reference is clearly to the pulse]; "thus the heart is known as the centre of all the vessels. Four vessels go to the nasal chambers, of which two convey mucus and two convey blood. There are four vessels within the temples or skull, from these the eyes obtain their blood. The four vessels divide inside the head and spread towards the hinder part." The Berlin papyrus speaks of the division into 32 vessels within the skull and implies that air traverses at any rate some of them. Returning to Ebers's papyrus—"When the breath enters the nostrils it penetrates to the heart and to the internal organs and supplies the whole body abundantly." This idea that certain of the vessels convey air you will observe is identical with the Greek conception and probably was its source. "Three vessels traverse the arms and extend to the fingers, three vessels also pass down the leg and are distributed to the sole of the foot, a vessel goes to each testis and one to each kidney. Four vessels enter the liver, conveying fluid and air; these may be the seat of various diseases as they are mixed with the blood; four vessels convey fluid and air to the intestine and spleen; two go to the bladder and from them the renal secretion is produced. Four vessels convey fluid and air to the lower abdomen, going to the right and left sides; from them is formed the alvine excretion." These vessels here described are clearly the iliac arteries and veins. "When the heart is diseased its work is imperfectly performed: the vessels proceeding from the heart become inactive, so that you cannot feel them" [no doubt this is a reference to changes in the pulse], "they become full of air and water. When the heart is dilated the vessels from it contain effete matter. If a suppurative or putrefactive disease occur in the body" [abscess I imagine, for which various sites are suggested] "then the heart causes it" [apparently the purulent material] "to traverse the vessels, fever or inflammation of various kinds occurs in the body, the heart is in a morbid state while the fever continues. In heart disease there is either disturbance of the action of the heart or the heart is congested or overfilled with blood, the heart is moved downwards, comes nearer the præcordia, and suffers weakness and nausea. When the disease affects the base or lower mass of the heart there is shortness of breath, the heart is displaced on account of the volume of blood from the abdomen" [probably the old idea of the rush of blood entering the heart from the liver]. "There may be fever or inflammation of the heart." Now here comes a passage of some therapeutic interest. "The heart during such disease must be made to rest to some extent if it be possible." Here we have wise advice from the ancient Egyptians, advice the importance of which we have scarcely as yet recognised and which we may to-day follow with advantage. "If the heart is atrophied (or wastes itself) there will be an accumulation of blood within it. When the disease of the substance of the heart is accompanied by dropsy there is a lessening" [in strength probably] "in the ventricle or cavity. When the weakness of the heart is due to old age there is dropsy. When there is raising or increase of the heart it presses towards the left side, it is increased by its own fat and is displaced; there may be much fat contained within its covering or pericardium. If in a suppurative disease the heart is pushed forward it floats or sinks in the fluid and is displaced." Here we surely have a reference to pericardial effusion. "If the heart trembles or palpitates, has little power, and sinks downwards the disease is advancing. When there is much beating at the præcordia, with a feeling of weight, when the mouth is hot and languid, and the heart is exhausted the disease is a fever or inflammation" In another place (folio 102) the heart is spoken of as being full of blood which comes or flows from it again. In folio 39, after a description of symptoms, follows a statement to the effect that the heart is distended, the sick man is short of breath because the blood has stagnated and does not circulate. This is an interesting expression, but judging from other parts of the papyrus the word translated circulate can only have a vague meaning, implying movement to and fro, just like the expression "περίοδος ἄματος" in the Hippocratic writings, which seems to imply the circuit of the blood, but in reality has only a similar indefinite meaning. It is evident that the Egyptians knew that blood flowed from the heart, but, like the Greeks, they never seem to have realised that the heart is a pump nor did they recognise valves.

The Leyden medical papyrus speaks of a paralysis or disturbance of some sort in the blood-vessels of the head, causing blindness and disorder in the body and in the limbs; this seems to be a description of the results of cerebral hæmorrhage. Remedies are suggested to subdue the vascular activity occurring in certain diseases. The various papyri from which I quote deal of course with practical medicine and not with physiology; no distinct definition as to structure or function is to be looked for in them; only as associated with diagnosis, prognosis, or treatment do we get statements as to the nature of the heart, the vessels, and the movement of the blood.

IMPORTANCE OF THE MEDICINE AND SANITATION OF ANCIENT EGYPT.

It is clear from the study of these medical papyri that medicine advanced considerably amongst the Egyptians and from them medical and sanitary knowledge has descended to us by two channels—namely, by the Greeks and through the Jewish race, while probably much of it was lost irrecoverably. Josephus quotes from Manetho a statement that Osarsiph, who Josephus says was the great Hebrew leader Moses, was a priest at Heliopolis where medicine was taught. It is highly probable that the sanitary laws of the Jews were derived from the Egyptians. Just as the Jews remembered the diseases of Egypt (Deut. xxviii., 60) so they also remembered the sanitary and remedial measures they had learnt there. Those of us who have seen in the later excavations at Knossos the evidences of sanitary knowledge of a somewhat high type, possessed by the Cretans at a remote period, exemplified among other things by drainage pipes scarcely excelled by our own to-day, knowing as we do

the close connexion between Crete and Egypt, may well believe that here we have an example of sanitation derived from Egyptian sources.

In England we have overlooked the importance of Egypt as a primary source of the science and art of medicine. If we regard with reverence the dim traditional form of Asklepios as a founder of our art, and the Asklepieia where throughout Greece and Magna Græcia medicine was practised and taught, in greater degree should we reverence the much more venerable I-em-hotep and view with interest the primæval medicine temples and hospitals of Egypt. In the ancient writings of the pseudo Apuleius Hermes is described as speaking to the youthful Asklepios as follows: "Thine ancestor, the first discoverer of medicine, hath a temple consecrated to him in the Libyan mountains near the Nile, where his body lies, while his better part, the spiritual essence, hath returned to the heavens, whence he still by his divine power helps feeble men as he formerly on earth succoured them by his art as a physician."

In the Cairo museum probably many of the present audience have seen the sepulchral stele of Shemkhetnankh, a great physician of the fifth dynasty who was contemporary with King Sahura and who is described in the stele as the principal physician of the Royal Hospital. His name, which is doubtless a title given to him by the monarch, means "He who possesses the things that give life." It is interesting to find that 5000 years ago a hospital should exist associated with, and under the patronage of, the Pharaoh and having its own staff of physicians. And it is manifest that our calling held a distinguished position at the time when art and learning in Egypt were at their zenith.

TESTIMONIES AS TO I-EM-HOTEP.

I-em-hotep rises before us as one of those intellectual giants who take all knowledge for their province. In his comprehensiveness he surpasses Leonardo da Vinci or our own Linacre; he is distinguished as a physician, a minister of the king, a priest, a writer, an architect, an alchemist, and an astronomer—great in all, but greatest in medicine; in the view of Egypt he is a god.

In the reign of Tosorthros, of the third dynasty, some 5000 years ago, we meet with the wise I-em-hotep in an inscription referring to the seven years of famine which befell Egypt in consequence of a succession of low Niles. He is there the adviser of Pharaoh; to him the king applies in his trouble for counsel and help. In the inscriptions in the temple of Edfu he is described at length as the great priest I-em-hotep the son of Ptah, who speaks or lectures. Perhaps his discourses or lectures were on medicine. Elsewhere he is described as the writer of the divine books. It may here be remarked that probably Ebers's papyrus was one of the six divine books attributed to Thoth ceremonially, but not improbably in large part the work of I-em-hotep. Manetho, while speaking of his eminence as a physician, refers to him also as an architect, the first to build with hewn stone. Not improbably he built the step pyramid of Sakkara, the tomb of his patron Tosorthros. Manetho also suggests that I-em-hotep improved and completed the hieroglyphic script of Egypt. In the Hermetic literature he is famed for his knowledge of astronomy or astrology; the Westcar papyrus describes him further as an alchemist and magician. These powers were always associated with medicine, and even to-day in the popular view they are not entirely dissociated from it. What share I-em-hotep may have had in these early discoveries of the movement of the blood we do not know. It does, however, seem clear that the Egyptians had discovered certain elementary facts and knew as much as the Greeks, as much as we find in the Hippocratic writings or in those of Aristotle and the later Alexandrian school, and the hypothesis seems a natural one that the knowledge possessed by the Greeks was acquired from Egypt.

METHODS EMPLOYED BY THE EGYPTIAN PHYSICIANS.

I may mention in passing that although the medical papyri which have come down to us are no doubt only an insignificant fraction of those possessed by the Egyptians we nevertheless find in them abundant reference to medicine and surgery. In the Kahun papyrus obstetrics is dealt with. Gynæcology, also ophthalmology, materia medica, and dentistry are dealt with in others, and even veterinary medicine was treated of in a papyrus a fragment of which was found by Professor Flinders Petrie.

As regards materia medica the Egyptians possessed the following drugs: lactuca, various salts of lead, such as the sulphate, with the action of which in allaying local inflammation they were well acquainted; pomegranate and acanthus pith as vermifuges; peppermint, sulphate and acetate of copper, oxide of antimony, sulphide of mercury, petroleum, nitrate of potash, castor-oil, opium, coriander, absinthe, juniper (much used as a diuretic), caraway, lotus, gentian, mustard, ox-gall, aloes, garlic, and various bitter infusions; mandragora, linseed, squills, saffron, resin, and various turpentine products; cassia, certain species of cucumis, cedar oil, yeast, colchicum, nasturtium, myrrh, tamarisk, powdered lapis lazuli, vinegar, indigo; the oasis onion, mastic and various gums, mint, fennel, hebanon or hyoscyamus, magnesia, sebeste (a tonic and a cough medicine), lime, soda, iron, and a great number of other agents, the names of which no one can at present translate.

Surgical instruments and the actual cautery were in use, also steam inhalations, massage, ointments, plasters, poultices, suppositories, injections, and emetics, and the importance of temperature in disease was to some extent recognised.

Prescriptions were written out in due form and sometimes at great length, fully equalling those of the most enthusiastic therapeutist of our own day. The longest prescription which I have read contained 35 ingredients. To read it was a formidable task; to take it I should think a much more formidable one. Some prescriptions are wise and rational, a few strange and repulsive, and some are associated with charms and spells. Human nature is the same in all ages; hence one was not surprised to meet with hair invigorators, hair dyes, cosmetics, pain killers, insect powders, and a soothing syrup containing opium for small children in use 3500 years ago. It was rather interesting to find that the symbol for a ʒ tenat often used in their prescriptions is identical with that indicating a drachm with us, though the amounts are not the same. I trust that the drachm will soon be as obsolete as the tenat.

A SUGGESTION IN REGARD TO PREVENTIVE TREATMENT OF VALVULAR DISEASE.

I have referred to certain facts, mostly of recent discovery, bearing on the existence of our profession in the remote past and in reference to the partial knowledge to which the priests of I-em-hotep attained as to the circulation of the blood, a subject not without a certain interest, but the advances of that knowledge made subsequently, which have on more than one occasion been dealt with in this room, those now making, and those yet to be made in the future are of more practical importance to us. Harvey first clearly unfolded the great secret of the course of the circulation, thus opening a wide door for the work of others, physiological and therapeutic. The principles of blood pressure, the action of vasomotor nerves, and other advances have followed. We have attained to a larger, though I believe as yet only to a partial and provisional hold of truth in these matters. As such we shall regard our knowledge if we are wise. The great mistake in all times has been that of believing that the truth already attained is the whole and that nothing remained behind. Our father Harvey has exhorted us ever to search and to study out the secrets of nature by the way of experiment. Will you pardon me if I devote the remainder of this paper to a brief description of an experiment dealing with a yet unsolved problem in the pathology of the circulation, to which I have devoted 25 years of my life. It is better to speak on a novel point with which one is fairly well acquainted, though it be of minor importance, rather than to utter commonplaces on greater questions with which everyone is familiar.

Valvular defect is one of the most important and perhaps the most common of circulatory diseases. It is one which probably we shall never be able to cure, and is thus one of the opprobria of medicine. Is it possible to treat it by prevention? This is the problem upon which I wish to speak a few words. I am the more encouraged to do this because I know that various Fellows and Members of this College hold similar views to those which I desire to unfold.

JOINTS RECOVER: WHY DOES THE ENDOCARDIUM FAIL TO DO SO?

There are in this audience many who have treated cases of acute rheumatism and cases of valvular disease in hundreds of instances. We are all aware that in acute rheumatism, however severe the joint lesion may be, however great the swelling, the pain, the local pyrexia, and the effusion was in

the large majority of cases after the usual treatment all these grave symptoms subside, or if they linger in any joint many of us know how certainly they will vanish if we stimulate the trophic and vasomotor nerves by small blisters applied to the adjacent skin, the final issue in most cases being the restoration of every joint to a normal condition. But, alas, we also know that when the endocardium covering the mitral or aortic valve cusps is in like manner attacked, a like restoration does not take place spontaneously excepting in few and rare instances. When regurgitation through the valve, shown by an apex bruit with accentuation of the second pulmonary sound, has occurred in acute rheumatism, if after treating the rheumatism we leave the affected heart to its own course, and the patient to his, persistent bruit, persistent pulmonary accentuation, hypertrophy, dilatation—in fact, lifelong heart disease and its train of attendant evils follow in a large majority of cases and mar or shorten life. Why should the rheumatic heart be so much more intractable than the rheumatic joint?

THE RHEUMATIC JOINT RESTS, BUT NOT THE RHEUMATIC HEART

No doubt the reason is that the joint can rest. The merciful influence of pain in the part affected insures repose for each affected joint. Suppose it were otherwise. Imagine pain absent and conceive for a moment that we could flex and extend an acutely rheumatic knee or elbow 60 or 80 times per minute continously, what would be the fate of the joint? Is there any probability that restoration would follow? Few of us, I think, would expect it, for it is a physiological law that repair in a diseased organ cannot coincide with full functional activity. When the endocardium and valve cusps are inflamed pain does not give the signal for rest, for, indeed, pain or no pain, the toiling heart cannot intermit its labours.

DISASTROUS RESULTS OF VALVULITIS IF NOT SPECIALLY TREATED.

During my 35 years of experience as a hospital physician and in private I have watched with special interest the fate of the numerous cases of endocarditis which come under my charge, endeavouring as far as possible to trace the later history of such cases for a lengthened period. During the earlier years I merely treated the rheumatism, believing, as I had been taught, that little or nothing could be done to prevent disaster to the heart. I had the pain of discovering that many, indeed most, of these cases merged into permanent valvular disease. This distressing experience induced me to experiment on various methods of preventive treatment. Of these, one has proved successful and has been constantly employed by me for 20 years.

The method is very simple: it is merely to give the heart the same advantages, the same opportunities for repair, so far as we can, as the joints enjoy; in other words, the most absolute quiet is enjoined, the patient lies with his head at a low level, pain and fever are subdued, no excitement is permitted, the patient is made as comfortable as we can make him, and sleep is encouraged—in fact, we seek to attain physiological rest. We follow the precept of our ancient Egyptian brother, declared so many thousand years ago: we give the ailing heart the nearest approach to rest that is practicable. In addition we administer sodium or potassium iodide, partly to help in the absorption of morbid exudations but chiefly to lower vascular tension, just as we give these drugs in cases of internal aneurysm. Lastly, we endeavour to influence the cardiac vasomotor and trophic nerves reflexly by gentle and almost painless stimulation of those cutaneous nerves which we know from physiological data and from the evidence of the referred pains of angina to be in close relation with the heart—viz., the first four dorsal nerves. I believe, however, that by far the most important factor in the abortive treatment of endocarditis is rest, rest for many weeks, the slowing of the heart, the lengthening of the diastole, which is the only rest-time possible, the careful avoidance of high blood pressures, which the weakened and softened valve cusps cannot sustain without peril, and the diminution of the volume of the blood to be moved. Only then, when functional activity is minimised, can we hope for repair of mischief, re-formation of destroyed endothelia and absorption of effusion in the valve cusps. Moreover, repair is only possible during the early stages of endocarditis: later the mischief is permanent, unalterable by any form of treatment.

I submit that these measures are rational, their objects being by affording rest to give opportunity for the exercise of the *vis medicatrix naturæ* which is our sheet-anchor, nay, indeed, to stimulate that natural reparative process which alone can effect restoration.

TWO OBJECTIONS TO THE PROPOSED METHOD.

It may be objected that there are two difficulties in our path. First, in regard to diagnosis, how are we to distinguish the signs of commencing endocarditis from those of mere dilatation? In the great majority of instances in which marked and continuing bruit occurs endocarditis is present and not mere dilatation, but I admit that in some cases discrimination is difficult. The wisest course is, if in doubt, to treat as endocarditis. Secondly, some physicians complain, as those at the Johns Hopkins Hospital have recently done, that they find difficulty in inducing private and hospital patients to submit to a sufficiently long period of rest. Occasionally that is so in the case of foolish or thoughtless persons, but in general, if the danger to which the heart is exposed be calmly and plainly stated to the patient and also if the hope of perfect recovery be held out to him through the agency of prolonged rest, he will agree to give this method a fair trial. Such, at least, has been my experience.

SUCCESSFUL RESULTS OBTAINED.

For 20 years continuously this method has been carried out. The results have been striking. The comparative absence of permanent heart disease after endocarditis has been in marked contrast to its frequency prior to the adoption of the treatment by rest. So striking indeed is the change that I confess it now seems to me that it would be an immoral act on my part to omit these measures in any recent case of endocardial disease. If we make it a rule to watch carefully for incipient valvulitis and if, when we find it, we secure for the heart prolonged rest, I believe that it is in our power to diminish in a most material degree the frequency of chronic valvular disease of the heart.

I desire to apologise to you, Mr. President and gentlemen, for the length of this address and to thank you for your patience and attention.

The Milroy Lectures

ON

DEATHS IN CHILDBED: A PREVENTABLE MORTALITY.

Delivered before the Royal College of Physicians of London on Feb. 25th and March 1st and 3rd, 1904,

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MEDICAL OFFICER OF HEALTH TO THE GLAMORGAN COUNTY COUNCIL.

LECTURE I. (*concluded from p. 1710*).

A CONSIDERATION of the foregoing remarks leads me, so far as the county of Glamorgan is concerned, to the following conclusions: 1. Puerperal fever often, though by no means as a general rule, selects for its ravages the most insanitary localities. 2. Our large and fair-sized towns show much the same mortality as similar towns in other parts of the kingdom. 3. In our densely populated mining valleys the mortality from puerperal fever is very high (Pontypridd, Merthyr, and Bridgend registration districts). This I unhesitatingly attribute, in a great measure, to unskilled and ignorant midwives. 4. The mortality from accidents of childbirth is only slightly higher than that for England and Wales, is unevenly distributed, and highest in a few of the mining valleys. In none of these places is there any difficulty of procuring skilled medical assistance at short notice.

What, then, are the circumstances and conditions of female life that determine these differences? In other words, what is the explanation that these mortality-rates are higher in Wales than elsewhere? Can a remark that the Registrar General made 20 years ago in one of his reports be true? "In North Wales, where the mothers are left to nature or to unskilful old women, the mortality is double that of London, and 9·4 mothers die to 1000 children born.'

I must admit that there is a great deal of truth in this remark, but I will not have it that our old women are more ignorant and less skilful than any other old women. It is well within my knowledge that most of the confinements among the poorer women are attended by untrained women in the country districts of Merionethshire and Cardigan; in fact, in all the country districts, villages, and small towns of Wales; and, from my experience in Glamorgan, which I shall shortly relate, I can prove without a doubt that they often spread puerperal fever broadcast and are often not interfered with. Can there be any other explanation of this high mortality in Wales? The conditions of life consequent upon the physical features of the country, especially in North Wales, often make it impossible to obtain skilled assistance in time; and if any assistance is to be obtained it is from untrained midwives or friends or neighbours who in such districts are often compelled to undertake this serious responsibility. Is there anything in the natural temperaments of the women of Wales that renders them more susceptible to the infection of puerperal fever or to succumb in childbed than other women? This I am unable to answer, but I firmly believe that at least a partial explanation of this high mortality is to be found in the conditions of their life, for hard is the lot of women in the agricultural districts of Wales and it is no wonder that they flock to our large towns. Farm servants, and even farmers' wives, work as hard as, or even harder than, the men. In the summer months they are continually to be seen, even when pregnant, hard at work in the harvest field and in winter attending to the cattle and sheep. Again, their food is of the poorest quality—in a word, they have to work too hard and do not get enough nourishment. This, I am convinced, has much to do with the prevalence of phthisis in these localities, and does it not often lessen their power of resistance to the inroads of any disease and render them more likely to succumb to the accidents of childbirth? This is not the case in our mining districts where wages are high and nourishing food is plentiful. Many times has my heart bled when called upon to attend these poor women in the wretched hovels which they often have to live and to die in. What wonder is it that they succumb in their travail, especially when left to nature, to the ignorant midwife, or to friends or neighbours.

SOME LARGE TOWNS AND INDUSTRIAL AND MINING CENTRES.

I have thought it desirable to extend my inquiries by including some of the large towns of the country and for this purpose, as details are only obtainable separately from the reports of the Registrar-General, in the case of some few towns I have, through the kindness of the respective medical officers of health, been furnished with the returns for the last 10 years (1891-1900). This was done by sending out a circular letter asking for information for each year under the following headings so as to obviate errors as much as possible: 1. Number of registered births. 2. Deaths from puerperal fever (to include deaths due to pyæmia, septicæmia, sapræmia, pelvic peritonitis, perimetritis, and endometritis occurring in the puerperium). 3. Deaths from accidents of childbirth (to include abortion, miscarriage, puerperal mania, flooding, accidental hæmorrhage, puerperal thrombosis, and other and ill-defined accidents of childbirth and pregnancy). 4. Number of puerperal fever cases notified. I have worked out the mortality-rates from the returns thus obtained and although I feel some hesitation in making use of them there can be no doubt about the deaths from puerperal fever; if the figures err at all they are below and not in excess of the truth. With regard to the deaths from accidents of childbirth they are more likely to be inaccurate than the others, but deaths classed under this heading are practically the same as they have been for the 20 years immediately preceding with the exception of the year 1901 (with which I do not deal). "Phlegmasia alba dolens" is now classed among the puerperal septic diseases instead of among accidents of childbirth. (Table XVI.)

TABLE XVI.—*Mortality Rates per 1000 Registered Births during the Period 1891-1900 (10 years).*

Puerperal Septic Diseases.

Stockport	4·0	Brighton	1·1
Huddersfield	3·6	Plymouth	1·1
Oldham	3·5	Rotherham	1·1
Rhondda	3·5	Birmingham	1·0
Merthyr Tydfil	3·1	Leeds	1·0
Salford	3·1	Bolton	0·8
Birkenhead	2·8	Southampton	0·7
St. Helens	2·7	Sunderland	0·6
Coventry	2·6	Tottenham	0·5
Portsmouth	2·4	Leicester	0·5
Derby	2·4	Cardiff	0·5
Halifax	2·2	Newcastle-on-Tyne	0·2
Mean for England and Wales (1881-1900)	2·1	Manchester	2·0
		Croydon	1·9
		London	1·8
		Bristol	1·8
		Burton-on-Trent	1·8
		Sheffield	1·8
		Hull	1·7
		Handsworth	1·6
		South Shields	1·3
		Bradford	1·2
		West Ham	1·1

These rates vary enormously and are difficult for me to explain. It will be noticed, however, that the districts where they are above the mean are industrial and mining centres. Beyond this I cannot go at present.

TABLE XVII.—*Accidents of Childbirth.*

Stockport	5·8	Sheffield	3·2
Bradford	4·6	Rhondda	3·1
Cardiff	4·4	Birmingham	3·0
Merthyr	4·4	Bolton	3·0
St. Helens	4·3	Derby	2·9
Rotherham	4·3	Salford	2·8
Newcastle-on-Tyne	4·3	South Shields	2·8
		Portsmouth	2·7
Huddersfield	4·1	Bristol	2·6
Halifax	4·1	Leicester	2·6
Plymouth	3·3	Sunderland	2·5
Oldham	3·2	Manchester	2·4
		Mean for England and Wales (1881-1900)	2·4
		Hull	2·3
		Burton-on-Trent	2·1
		Birkenhead	2·1
		Handsworth	2·0
		London	1·9
		Croydon	1·
		Southampton	1·6

Here again the high rates are confined to mining and industrial centres. It would be interesting to investigate how far the various occupations in which females are employed influence the death-rate from accidents of childbirth. The figures which I have given show that the deaths in childbirth in England and Wales have remained undiminished and that this mortality shows no signs of diminution.

Puerperal septic diseases.—What, then, are the causes of this condition of affairs? Is it because the midwives who attend the majority of confinements in those districts where the rates of mortality are highest are ignorant and unskilled in the work? Is it because aseptic and antiseptic precautions are not rigidly observed always in general midwifery practice as it is in the departments (internal and external) of lying-in hospitals and under other conditions? Or is it unnecessary interference with the natural course of labour? I unhesitatingly answer that midwives have played a very important part in the causation of this sustained high mortality both from puerperal septic diseases and from accidents of childbirth. This I propose to prove later. The untrained and unskilful of them—and they are by far in the majority—have no knowledge whatever of the true meaning and application of aseptic and antiseptic measures and are unable to diagnose dangers and consequently have no idea when to send for medical assistance until it is often too late. The late Dr. R. Milne Murray attributed this high rate to the misuse of anæsthesia and to the ridiculous parody which in many practitioners' hands stands for the use of antiseptics. He observes: "The use which has been made of two of the greatest blessings of humanity has converted them into little else than a curse. ..... Before the days of anæsthesia interference was limited and obstetric operations were at a minimum, because interference of all kinds increased the conscious suffering of the patient." How far the misuse of anæsthesia and antiseptics is borne out by facts I have no knowledge. Others attribute this high mortality from puerperal septic diseases to the want of aseptic and antiseptic precautions. On such a statement I am not in a position to give an opinion as to what the general practice of the accoucheur is, but later, when discussing the mortality in lying-in hospitals and under other conditions, I hope to be able to show what has been accomplished by the rigid observance of all aseptic and antiseptic precautions. Others, again, attribute the high mortality from puerperal sepsis to "unnecessary interference with the natural course of labour." But in spite of all our increased knowledge of sepsis, how is it that the mortality from puerperal sepsis is still so high?

Dr. Peter Horrocks, in a paper of his recently published, said: "My answer to this question is that there is too much interference with the natural course of labour, too much

douching and examination of the parturient woman, and that even yet the majority of medical men have not fully realised that, on the one hand, on making a vaginal examination of a woman in labour, or just after labour, or doing any manipulative work that may be needful, the process of hand sterilisation should be as elaborate as if they were about to do an abdominal section and, on the other, that unless they take the greatest care after such hand sterilisation they will get the examining finger soiled by germs from their own clothes, the bedclothes, or the patient herself."

Professor J. W. Byers puts it thus: "In our ideal obstetric practice we aim at having an aseptic patient, nurse, and medical attendant and all our precautions, such as keeping the several parts of the parturient, our own hands, as well as those of the nurse, and all obstetric instruments and appliances aseptic, the greater employment of external examination, the limitation of the vaginal douche only to acquire information which cannot be obtained by abdominal palpation, the not allowing the labour to be too prolonged, and the immediate suturing of any wounded parts,—I say all these precautions are taken with a view of preventing sepsis."

To make assurance doubly sure a great number of obstetric physicians strongly recommend the systematic adoption of antiseptics immediately before, during, and after labour. The supporters of the systematic use of antiseptics, whether they are indicated or not, do not assume that any case that comes before them is aseptic, for they may find too late that their assumption had been unfound. They believe in prevention rather than cure, indeed the best cure of most cases of puerperal septic disease is their prevention.

Dr. P. R. Cooper has observed: "Personally I feel very strongly that we have no right in any case merely to assume aspeticity when we have in our power, if we only use them, the means 'to make assurance doubly sure' by a thorough and logical application of aseptic and antiseptic principles in our midwifery work."

Dr. G. E. Herman in a paper on the Prevention of Puerperal Fever in General Practice observes: "How can puerperal fever be prevented? The answer is by keeping aseptic germs from the patient. Some people try to do this by asepsis—that is, by simple cleanliness—and are confident that their precautions cannot fail. Others add to this antisepsis—i.e., the use of germicides, to kill any germs that cleanliness may fail to wash away. A prudent man insures his house although the does not think that anyone will set it on fire, and in like manner a prudent accoucheur will use antiseptics when he can do so without harm, even though they may be sometimes unnecessary."

Accidents of childbirth.—The prophylaxis of the accidents of childbirth opens up a wide field of labour where a great deal can be done, and with the help of the work of those who have gone before us it can be claimed that for every obstetrical complication which can arise, with only, perhaps, one exception, we have at our disposal a procedure with which it can be met—that, in fact, there is scarcely a peril that can beset a woman in travail out of which we have not the means of rescuing her. There are accidental conditions, such as grave disorders of the nutritive apparatus, of the heart, lungs, kidney, &c., which produce complications with which obstetric medicine is at present powerless to deal.

Dr. Milne Murray has also written: "But for all else (save, perhaps, eclampsia) we profess to have a remedy, provided always we are entrusted with the care of the patient in reasonable time. Malpresentation, malposition, deformed pelvis of whatever degree, hæmorrhage of whatever sort, rupture of the uterus, each and all have their appropriate treatments, which have been tested times and times again and have stood the test with unqualified success. This, then, is the profession, and the reasonable profession, made by the obstetrician to-day, armed as he should be with an accurate knowledge of obstetrics and with anæsthetics and the technique of antiseptic surgery."

Professor Byers, in his address on Obstetrics delivered at Cheltenham, urges medical practitioners to give much more attention to patients who are pregnant, and especially in the case of those looking forward to their first confinement. "A pregnant woman," says he, "when she engages a doctor to attend her should be examined as carefully as if she were an applicant for life insurance; in this way he may at an early date detect a flaw in some of her organs (heart, kidneys, lungs, &c.), the knowledge of which may lead him to adopt a judicious prophylactic treatment. We must instruct our pregnant patients on such questions as diet, exercise, management of the secretions, and a most careful examination of the urine should be made from the fourth month onward, not merely for the presence of albumin, but in reference to its amount and the reduction of urea. In this way a form of toxæmia (eclampsia) so fatal to mother and child may from its early detection be warded off, for it must be admitted that in the majority of cases the treatment of eclampsia, like post-partum hæmorrhage, is its prevention." In the case of multipari an accurate history of previous pregnancies and labours is of the utmost importance. It would ill become me to endeavour to point out in any detail how the various conditions may be guarded against, but that such is the case there can be no doubt. A medical man who knows his patient can do a great deal to ward off many of the causes of the accidents of childbirth; even if he has no previous knowledge of the patient much can be accomplished provided always that he is sent for in time. In future midwives will only have to undertake cases of normal labours, and when any complication arises or danger is indicated it is their duty to send at once for a medical practitioner and at the same time to give their reasons for so doing. Sometimes it is difficult to get medical assistance, and there is no wonder that the accidents of childbirth are generally more frequent in sparsely populated rural districts where medical assistance is difficult to obtain in a reasonable time. That the many deaths caused by accidents of childbirth include a considerable number of avoidable cases is evident from the fact that in some of the large towns where rickets and other diseases which give rise to some of the most fatal accidents of childbirth are confessedly more common the rate of mortality from accidents of childbirth is considerably less than in rural districts where the reverse would have been anticipated. The explanation possibly lies in the fact that skilled medical assistance can be obtained at a short notice.

MORTALITY IN MATERNITIES OR LYING-IN HOSPITALS.

"How can the dangers of child-bearing, which have been attributed to various causes, be alleviated?" This question was asked over a century ago (and it is also asked now), and seeing how destitute of comforts, means, and medical assistance, and how abandoned and repudiated by society many of the married and single women about to be confined were, the thought occurred to some benevolent persons that they might be received and delivered in hospitals, and their answer to the above question was, "By the establishment of maternity hospitals," and what seemed more likely to be the means of saving those women in travail from peril than the maternity? Unfortunately, in a very few years experience proved that the assemblage of child-bearing women under one roof and under the conditions there existing gave rise to fatal epidemics of child-birth fever and the mortality was almost invariably in excess of the mortality in detached dwellings; indeed, the mortality became in some instances excessive, in other instances appalling, and the inscription, "Lasciate ogni speranza voi ch'entrate" ("All hope abandon ye who enter here") would have been as appropriate over their open doors as it was over the gloomy underworld of the Italian poet. Seeing how disastrous some of these epidemics were some medical men at once came to the conclusion that no help was to be expected from maternities; others, however, were more hopeful of seeing this mortality reduced by the progress of the art of obstetrics and the solution of various other problems, including a better knowledge of the mechanism of labour. Among the former class was Dr. Le Fort and among the latter Dr. Matthews Duncan. Later (1870) Dr. Le Fort, who assiduously collected existing statistics of lying-in hospitals, asserted as a general result of his inquiries that "the mortality of women delivered at home was one in 122 and the mortality of women delivered in hospital one in 29." This Dr. Duncan, in his book entitled "Mortality of Childbed and Maternity Hospitals," pronounced an erroneous statement. Dr. Duncan arrived at the conclusion that not fewer than one in every 120 women delivered at or near the full time died within the four weeks of childbed. This statement was received with astonishment and incredulity and Dr. W. Farr, who had in 1856 declared the mortality in childbed in England and Wales to be one in 189, denounced Dr. Duncan in good round terms as an alarmist. Before his death, however, Dr. Farr came so nearly accepting Dr. Duncan's estimate as to allow that one woman in 129 died in childbed.

Miss Florence Nightingale, the lady who had done so much good in other directions, directed her attention to the question of lying-in hospitals and she fully realised that educated midwives as well as physicians were required in order to secure the best chances of living to mother

and child and that young mothers themselves required instruction and special care to insure their living natural lives so as to save themselves and offspring during confinement. Miss Nightingale, in her notes on lying-in institutions, the production of which was evidently suggested to her by the failure the committee of the fund made to establish a training school for midwives in King's College Hospital, shows that with every care 27 poor women, or one in 29, died out of 781 delivered, and she shows besides the reason why. She established one capital fact under the head of "Military lying-in management," and it is this: "Ordinary women have no need of long nursing after lying-in; it is all over in a few days after retirement and delivery in a rude compartment of a hut." Her description of two camp hospitals, as they were called, was as follows:—

> The Shorncliffe Hospital is an old wooden hut of the simplest construction, with through ventilation. It is situated on rising ground close to the sea and facing it, so that the sea breeze sweeps right through it. It is scarcely more than a makeshift and here are the results. Up to December, 1869, there had been 702 deliveries in the hut, among which there was one death from scarlet fever and one from hæmorrhage, besides two deaths following craniotomy. There was not a single case of any puerperal disease. In Colchester, from 1865 to 1870, there had been 252 registered deliveries and no deaths. In the Colchester wooden hut the patient is received into a separate compartment, of which there are four, where she is delivered and remains until she is discharged to quarters. It is very rarely indeed, if ever, that the four compartments are occupied simultaneously. The average stay is ten days, the average number of deliveries a year 50. This hut does not form part of a hospital. It is a separate establishment solely for lying-in women, as such accommodation should always be.

After quoting the above Dr. Farr wrote:—

> When we consider the want of adequate accommodation in large towns for the wives of working men it must be evident that a certain number of them would find great comfort in being able to retire, as the soldier's wife does, into a hut for a few days until their trouble is over and for this surely arrangements might be made to enable them to pay beforehand by instalments. The natuary, clean and ventilated, armed with proper appliances, and a midwife on the spot, would be of more use than the mortuary. It would no doubt succeed in the end if sufficiently distributed in the right quarters about towns, but as its use would have to be taught it would be some time before it could, as it should, be self-supporting. The Peabody Fund might give the natuary a trial by building a few suitable houses and letting them on easy terms.

The above are excellent results—954 deliveries without a single death from a septic disease. It will also be noticed that the following conditions existed—viz., through and thorough ventilation, absolute cleanliness or asepsis, and perfect rest and seclusion—each patient being received into a separate compartment where she was delivered and remained until discharged to quarters. It is further to be noted that the hut did not form part of the hospital; it was a separate establishment for lying-in women as such accommodation should always be. The natuary, it is observed, was clean and ventilated and armed with proper appliances, with a midwife on the spot. These, indeed, were ideal lying-in hospitals.

Instruction in midwifery is of remote origin and in answer to a question by Dr. Farr in 1875, "Are the women instructed in midwifery?" the committee of the Society of Infant Mortality replied: "Answers in the negative are being received from all parts of the country, with the exception of Glasgow and Sheffield." From several districts the replies indicated not merely the want of any special education but gross ignorance and incompetence and a complete inability to contend with any difficulties that might occur. The committee noticed that in London many women were practising who had received a certain amount of instruction at the various institutions. Thus a very large number of the mothers were attended by midwives, some instructed and others incompetent to deal with any ordinary cases of difficulty. A large proportion of the mothers were attended by physicians, surgeons, and apothecaries; some at the head of their art in Europe and others skilful and unskilful in various degrees. Dr. Pitman, the then registrar of the Royal College of Physicians of London, said: "To the best of my belief the College included midwifery as one of the subjects of its examinations as early as 1815." The Licentiates of the Apothecaries' Society of London have been examined in midwifery since 1850. At the Royal College of Surgeons of England the midwifery licence was conferred for the first time in December, 1852.

Maternity hospitals are of remote origin and many were in existence before the registration of births and deaths was even thought of. Goethe begins his autobiography by observing that through the unskilfulness of the midwife he was born for dead and only after the manifold efforts of those around him saw the light in 1749. His misadventure, it is said, so impressed his grandfather, Textor, the mayor, that he introduced an obstetrician and instituted or restored the school of midwifery in Frankfort, and what had been Goethe's danger proved a means of safety to the city. The Royal Maternity Charity was founded in London in 1757. The Queen Charlotte's Lying-in Hospital, London, was instituted in 1752, rebuilt in 1856, and incorporated by Royal Charter in 1885; a new wing was added in 1886 and the hospital was further enlarged in 1889. It is licensed according to Statute 13, George III., cap. 82. There are 38 lying-in hospitals in Great Britain. Queen Charlotte's Hospital, London, is the only one which approaches the three great Irish maternities. It holds a Royal Charter for the express purpose of training, examining, and certifying midwives.

TABLE XVIII.—*Showing the Number of Patients delivered in the Hospital from 1857 to 1902 inclusive, with the Number of Deaths and the Rate of Mortality.*

Year.	Number delivered in hospital.	Number of deaths.	Proportion of deaths to deliveries. 1 in–	Rate of mortality per 1000.
1857	245	3	81·7	12·2
1858	341	3	113·6	8·8
1859	330	27	11·8	84·4
1860	256	18	14·2	70·3
1861	269	20	13·4	54·2
1862	351	17	14·1	48·4
1863	386	6	60·4	15·5
1864	384	13	29·5	33·9
1865	225 (6 months)	9	45·0	40·0
1866	408	7	58·2	17·2
1867	412	7	58·8	17·0
1868	464	5	92·8	10·8
1869	414	7	59·1	16·9
1870	484	6	80·6	12·4
1871	452	7	64·5	15·2
1872	433	12	36·1	27·7
1873	416	15	27·7	36·1
1874	443	9	49·2	20·3
1875	394	9	43·8	22·8
1876	416 (9 months)	19	21·9	45·7
1877	466	6	77·6	12·9
1878	592	9	65·9	15·2
1879	333 (6 months)	16	20·6	48·0
1880	602	2	301·0	3·3
1881	669	10	66·9	14·9
1882	692	10	69·2	14·4
1883	683	9	78·5	13·6
1884	775	5	155·0	6·45
1885	857	6	142·8	7·0
1886	885	8	110·6	9·0
1887	962	2	481·0	2·1
1888	865	2	432·5	2·3
1889	995	1	995·0	1·0
1890	892	4	223·0	4·48
1891	942	4	237·2	4·24
1892	972	7	138·9	7·2
1893	1009	6	168·1	5·9
1894	1079	8	134·8	7·4
1895	1124	6	168·1	5·9
1896	1151	10	115·1	8·68
1897	1101	0	0·0	0·0
1898	1112	3	370·6	2·6
1899	1150	5	230·0	4·3
1900	1183	8	147·9	6·7
1901	1284	4	321·0	3·1
1902	1271	5	254·2	3·9
Total ...	31239	375	80·6	12·0

The charter of the Rotunda Lying-in Hospital, Dublin, was granted over 140 years ago, that of the Coombe Lying-in Hospital, Dublin, was granted in 1867, and the National Lying in Hospital, Dublin, received its charter in 1903. The objects of Queen Charlotte's Lying-in Hospital are: (1) to deliver all married women both in hospital and at their own homes; (2) to deliver all deserving single women in the hospital with their first child only; and (3) the training of medical pupils, midwives, and monthly nurses. Indeed, the object of all maternities is to extend to destitute and poor women the necessary assistance, attendance, and nursing during childbirth.

Dr R Boxall in his "Antiseptics in Midwifery" (1894) observes:—

> It is not many years ago, owing to the ease with which the disease (puerperal fever) could be spread, under the then existing conditions, the mortality and illness from blood-poisoning in our lying-in hospitals even reached appalling proportions, and so far exceeded what was then supposed to be the case in all obstetric practice generally, that demands were made, and not altogether unreasonably, for the extinction of such institutions. Indeed, similar experience befell most of the lying-in hospitals, the deaths at times became so appalling that they had to be closed for disinfection and other purposes.

I propose here to give in some detail the mortality statistics of two important lying-in hospitals and the midwifery department of a London hospital—viz.: Queen Charlotte's Lying-in Hospital, London, founded in 1752; the General Lying-in Hospital, London, founded in 1765; and the midwifery department of a London hospital with a medical school attached.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL.—INTERNAL DEPARTMENT.

In Tables XVIII. and XIX. are given the results of a search which I was permitted to make into the reports and records of this hospital, together with (1) the number of patients delivered in the hospital from its rebuilding in 1857, including the number of deaths and the rate of mortality; and (2) the number of patients delivered at their own homes.

TABLE XIX.—*Showing the Number of Patients delivered at their Own Homes from 1882 to 1902 (inclusive).*

Year.	Number delivered at own homes.	Number of deaths.	Proportion of deaths to deliveries 1 in—	Rate of mortality per 1000.
1882	780	2	390·0	2·5
1883	827	2	413·5	2·4
1884	884	4	221·0	4·5
1885	998	3	332·6	3·0
1886	1,106	3	368·6	2·7
1887	1,196	2	598·0	1·6
1888	1,151	2	575·5	1·7
1889	1,179	1	1179·0	0·8
1890	1,070	0	0·0	0·0
1891	1,143	0	0·0	0·0
1892	1,133	3	377·6	2·6
1893	1,508	0	0·0	0·0
1894	1,318	4	329·5	3·0
1895	1,370	1	1370·0	0·7
1896	1,122	2	561·0	1·7
1897	1,124	1	1124·0	0·8
1898	1,070	1	1070·0	0·9
1899	1,011	3	337·0	2·9
1900	971	1	971·0	1·0
1901	1,026	3	342·0	2·9
1902	1,204	1	1724·0	0·8
Totals... ...	22,891	39	587·1	1·7

It will be seen that the above tables include the deaths from all causes. No particulars as to the cause of death could be found before 1876 and in the external department before 1898. Table XVIII. shows a death-rate from all causes varying from 84 or 1 in 11 to *nil* per 1000 deliveries. The rate was uniformly high until 1884; after that date it has shown a considerable variation from 8·68 in 1896 to 1 and *nil* in 1889 and 1897 respectively. The mean rate for the period 1884–92 was 4·7. There is no record either of the number or causes of death among those delivered at their own homes before 1882. From 1882–1902 the death rate from all causes has varied but slightly—i.e., from 4·5 to 0·0. The mean rate for the period of 21 years was 1·7, which is extremely satisfactory and much lower than the rate in the internal department, but this is not to be wondered at when one remembers that the majority of the worst cases are brought into the hospital long after labour commences and that a large number undergo some of the major operations, as will be seen from the following table:—

TABLE XX.—*Showing the Mortality after Major Operations at Queen Charlotte's Lying-in Hospital.*

Year.	Operations.									
	Induction.	Version.	Forceps.	Craniotomy.	Embryotomy.	Cæsarean section.	Porro's operation.	Symphysiotomy.	Total.	Deaths (maternal).
1895 ...	5	4	22	3	—	1	—	1	36	—
1896 ...	31	9	115	—	—	—	—	—	155	7*
1897 ...	14	12	121	5	—	—	—	—	152	—
1898 ...	22	10	164	9	—	—	—	—	205	1†
1899 ...	11	10	110	3	—	4	—	—	138	1‡
1900 ...	15	9	159	6	1	9	—	1	200	5
1901 ..	15	4	150	4	1	2	—	—	176	2§
1902 ...	28	8	152	5	—	7	—	—	200	—
Totals	141	66	993	35	2	23	—	2	1262	16

* Four after version (placenta prævia; contracted pelvis). Two after forceps (ante-partum hæmorrhage; ruptured cervix). One (?) after forceps (Bright's disease).

† After craniotomy.

‡ After version (placenta prævia case).

‖ One after induction. Two after forceps (phthisis and pulmonary embolism). Two after Cæsarean section.

§ After version (collapse and placenta prævia).

The table shows that during the eight years 1895–1902 1262 operations were performed with 16 deaths in all. This is equivalent to a death-rate of 12·6 per 1000 deliveries.

One is further struck with (1) the high death-rate before every closure of the hospital; (2) the low death rate after each reopening; and (3) the permanent low death-rate (with a few exceptions) that has been maintained since 1883. In Table XXI. are given the deaths from septic and non-septic causes from 1876–1903 together with particulars recorded of each death.

On examining the figures in Table XXI. it will be seen that during the period of 28 years (1876–1903) 25,207 deliveries took place, resulting in 77 deaths from septic causes. This is equivalent to a death-rate of 3·0 per 1000. It will be further seen that the number of deaths from septic causes has kept uniformly low, with one or two exceptions, since 1883. From 1883–1903 21,437 deliveries took place, resulting in 37 deaths from septic causes. This is equivalent to a death-rate of 1·7 per 1000. During the last ten years 11,620 deliveries took place, resulting in 17 deaths from septic causes. This is equivalent to a death-rate of 1·4 per 1000. During the period 1857–1903 the hospital had to be closed on three occasions—viz., in 1865 for six months, in 1876 for nine months, and in 1879 for six months on account of epidemics of puerperal septic diseases. The following are abstracts from the hospital reports:—

> An epidemic occurred in the hospital of so severe and fatal a nature that it became necessary to close the wards for several weeks in order that they might be thoroughly disinfected. This has been carefully done, a more complete system of ventilation has been adopted, ... thoroughly disinfecting their beds, bedding, and clothes by the apparatus erected by the hospital, that a recurrence of so great a calamity may be prevented in future.
>
> The frequency of the occurrence of blood-poisoning in general hospitals has been lessened by the application of scientific remedies, and there is no reason why in lying-in hospitals also, the same success may not be obtained.

Before 1898 no record could be found of the deaths from septic causes in the external department but after that date the particulars found are given in Table XXII.

TABLE XXI.—SHOWING THE DEATHS FROM SEPTIC AND NON-SEPTIC CAUSES IN QUEEN CHARLOTTE'S LYING-IN HOSPITAL SINCE 1876.

TABLE XXI.—SHOWING THE DEATHS FROM SEPTIC AND NON-SEPTIC CAUSES IN QUEEN CHARLOTTE'S LYING IN HOSPITAL SINCE 1876.

Year...	1876 (9 mths)	1877	1878	1879 (6 mths)	1880	1881	1882	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903 (9 mths)
Deliveries	416	466	592	333	602	669	692	663	778	857	885	962	885	905	892	942	972	1069	1079	1124	1151	1101	1112	1150	1163	1284	1271	1165
Deaths from septic causes	*a.i.y.* 11	*a.m.* 4	—	*a.* 14	*a.* 1	*a.z.* 4	*a.* 6	*a.* 1	*a.* 3	*a.* 3	*a.* 2	*a.* 2	*a.* 1	*l.* 1	*y.* 2	*u.* 1	*a.* 2	*a.* 2	*a.w.x.* 5	*a.* 1	*a.t.* 3	—	*a.* 1	*a.u.* 2	*u.x.* 2	—	*z.* 2	*v.* 1
" " non-septic causes	*b.l.* 2	*a.i.* 2	*b.t.u.* 9	*g.o.* 2	*g.* 1	*t.p.u.* 3	*d.t.u.* 4	*b.* 2	*f.h.* 3	*g.h.* 2	*b.h.p.* 3	—	*j.* 1	—	*h.k* 2	*d.g.j.* 3	*c.g.h.* 3	*c.h.u.* 4	*d.g.* 3	*c.h.j.* 4	*d.i.g.l.u.* 7	—	*h.o.* 2	*a.t.o.* 3	*c.e.j.n.p.* 6	*c.h.t.l.* 4	*d.h.* 3	*h.o.* 5
Cause not recorded	6	—	—	—	—	3	—	6	—	1	3	—	—	—	—	—	2	—	—	1	—	—	—	—	—	—	—	—
Total deaths	19	6	9	16	2	10	10	9	6	6	8	2	2	1	4	4	7	6	8	6	10	—	3	5	8		5	6

a, Acute œdema of lung. *b*, Old-standing disease (including internal affections and chest affections). *c*, Phthisis (including general acute tuberculosis). *d*, Morbus cordis. *e*, Intracranial tumour. *f*, Apoplexy. *g*, Bright's disease (including albuminuria, uræmia). *h*, Eclampsia (including convulsions). *i*, Exhaustion (including feeble women, and collapse after operations for contracted pelvis). *j*, Pulmonary embolism. *k*, Clot in heart. *l*, Placenta prævia. *m*, Placenta prævia, postpartum hæmorrhage). *n*, Post-partum hæmorrhage (including ruptured uterus and hæmatocele). *o*, Accidental hæmorrhage (including concealed accidental hæmorrhage and hæmophilia). *p*, Pneumonia. *q*, Pneumonia and pericarditis. *r*, After Porro's operation. *s*, Septicæmia (including sepsis and puerperal fever and septic endometritis). *t*, Pyæmia. *u*, Peritonitis (including acute and general). *v*, Appendicitis and peritonitis. *w*, Emphysema and peritonitis. *x*, Suppurating fibromyoma. *y*, Bursting of suppurating ovarian cyst (including endometritis; uræmia. *z*, Infective endocarditis. *z*$_1$, erysipelas.

TABLE XXII.—*Showing the Number of Deliveries and of Deaths from Septic Causes for the Quinquennial Period, 1898–1902.*

Year.	Deliveries.	Deaths.	Remarks.
1898 ...	1070	1	Serious complications not due to septicæmia.
1899 ...	1011	3	Two of these septicæmia.
1900 ...	971	1	Cerebral embolism.
1901 ...	1026	3	One septicæmia, two ante-partum hæmorrhage.
1902 ...	1204	1	Consumption.
Totals	5282	9	—

So that among 5282 deliveries there were three cases of septicæmia, which is equivalent to a death-rate of 0·5 per 1000, an exceedingly satisfactory result.

GENERAL LYING-IN HOSPITAL, LONDON—INTERNAL DEPARTMENT.

In the following tables are given the figures showing the mortality-rates for different periods at this institution :—

TABLE XXIII. (Ferguson).—*Showing Number of Deliveries and Deaths during a Period of Twelve Years (1827 to 1838 inclusive).*

		1827	1828	1829	1830	1831	1832	1833	1834	1835	1836	1837	1838	Total.
January	A	—	2	9	3	—	2	—	—	2	4	3	9	34
	B	—	0	3	0	—	0	—	—	2	0	0	8	13
February	A	—	2	7	—	—	—	—	—	2	6	—	—	17
	B	—	0	2	—	—	—	—	—	1	4	—	—	7
March ...	A	1	—	3	2	—	—	2	—	—	6	—	8	22
	B	0	—	1	2	—	—	0	—	—	2	—	6	11
April ...	A	3	—	1	1	4	1	1	3	2	6	3	9	34
	B	0	—	0	0	1	1	0	0	2	2	1	6	13
May ...	A	4	4	—	—	1	—	2	—	5	2	2	—	20
	B	1	0	—	—	1	—	2	—	2	0	1	—	7
June ...	A	—	3	—	—	—	1	2	—	6	4	—	—	16
	B	—	1	—	—	—	0	1	—	3	0	—	—	5
July ...	A	—	3	—	—	—	2	—	—	—	—	—	—	5
	B	—	0	—	—	—	0	—	—	—	—	—	—	0
August	A	—	3	1	—	—	—	—	—	—	—	—	—	4
	B	—	1	0	—	—	—	—	—	—	—	—	—	1
September ...	A	2	8	—	—	—	—	1	—	—	—	1	—	12
	B	0	2	—	—	—	—	0	—	—	—	0	—	2
October	A	—	4	—	—	—	2	—	—	5	—	—	—	11
	B	—	0	—	—	—	0	—	—	0	—	—	—	0
November ...	A	—	—	—	1	2	—	—	4	2	—	—	—	9
	B	—	—	—	0	0	—	—	4	0	—	—	—	4
December ...	A	—	8	3	—	2	—	1	2	2	3	—	—	21
	B	—	3	0	—	0	—	0	1	0	1	—	—	5
Totals ...	A	10	37	24	7	9	3	9	9	26	31	9	26	205
	B	1	7	6	2	2	1	3	5	10	9	2	20	68

A = attacked. B = died.

The hospital was closed in February, 1838, and was again closed from April to November, 1838.

From the above table it will be seen that one in every three died from puerperal fever.

TABLE XXIV. (Boxall).—*Showing Number of Deliveries, Deaths, and Death-rate during Different Periods.*

Period.	Deliveries.	Deaths.	Average death-rate from all causes.
1838–1860 ...	5833	180	1 in 32½ or 30·85 per 1000.
1861–1879 ...	3773	64	1 in 57½ or 16·96 per 1000.
1880–1887 ...	2585	16	1 in 161½ or 6·18 per 1000.
1888–1892 ...	2364	9	1 in 262½ or 3·80 per 1000.

TABLE XXV. (Williams).—*Showing Deliveries, Deaths, and Death-rate during a Period of Eleven Years*

Period.	Deliveries.	Deaths.	Average death-rate from all causes.
1893-1903 ...	5766	27	1 in 213½ or 4·66 per 1000.

TABLE XXVIII.

Period.	Deliveries.	Deaths.	Death-rate.
1880-1892	4948	10	1 in 494·8 or 2·0 per 1000.
1893-1903	5766	3	1 in 1922·0 or 0·5 per 1000.

Summarising the results in Tables XXVI. and XXVII. we arrive at the following figures for puerperal sepsis.

TABLE XXVI.—SHOWING THE DEATHS FROM SEPTIC AND NON-SEPTIC CAUSES IN THE GENERAL LYING IN HOSPITAL, LONDON, FROM 1880-1892.

Year	1880	1881	1882	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892
Deliveries	230	172	325	341	334	395	383	404	497	484	430	463	490
Deaths from septic causes	*a.* 1	—	*d e.* 2	*g.h.i.* 3	*j.* 1	*k.* 1	—	—	*q.r.* 2	—	—	—	—
,, ,, non-septic causes	*b.c.* 2	—	*f.* 1	—	—	*l.m.n.* 3	*o.* 1	*p.* 1	—	*s.t.u.v.* 4	*w.* 1	*x.y.* 2	—
Total deaths	3	—	3	3	1	4	1	1	2	4	1	2	—

a, Septicæmia, abscess in uterine wall. *b*, Pneumonia, syphilitic ulceration of larynx. *c*, Puerperal eclampsia. *d*, Pyometritis, peritonitis septic phlebitis. *e*, Purulent peritonitis, suppurating pelvic cyst (craniotomy). *f*, Puerperal mania. *g*, General septic infection. *h*, Septic phlebitis, acute endocarditis. *i*, Pelvic abscess, pyolymphangitis, perimetritis. *j*, Pyometritis, septic phlebitis, acute endocarditis. *k*, Septic phlebitis and general pyæmia. *l* and *m*, Advanced pulmonary phthisis. *n*, Mercurialism and morphism. *o* and *p*, Puerperal eclampsia. *q*, Sloughing of soft parts, parametritic abscess. *r*, Hospital gangrene. *s*, Hæmorrhage (accidental and post-partum). *t* and *u*, Accidental hæmorrhage. *v*, Exhaustion, prolonged labour, chronic nephritis (Cæsarean section). *w*, Exhaustion, prolonged labour, cancer of uterus (Cæsarean section). *x*, Rupture of uterus, prolonged labour, hydrocephalus. *y*, Syncope, unavoidable hæmorrhage, heart disease.

Deliveries = 4948. Deaths from septic causes = 10 in 13 years.

Total deaths are equivalent to a rate of 5·0 per 1000 deliveries. Deaths from *septic causes*, 2·0 per 1000 deliveries.

TABLE XXVII.—SHOWING THE DEATHS FROM SEPTIC AND NON-SEPTIC CAUSES IN THE GENERAL LYING-IN HOSPITAL, LONDON, FROM 1893 TO 1903.

Year	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903
Deliveries	527	535	535	508	520	548	560	500	497	480	556
Deaths from septic causes	—	—	—	*u.v.* 2	—	—	—	—	—	—	*t.* 1
,, ,, non-septic causes	*a.b.* 2	*a c d.e.* 4	*f.* 1	—	*g.* 1	*h.i.j.k.l.* 5	*b.m n.* 3	*o.* 1	*a b.p.q.* 4	*r.* 1	*a.s.* 2
Total deaths	2	4	1	2	1	5	3	1	4	1	3

a, Puerperal convulsions. *b*, Pnthisis. *c*, Pelvic abscess burst into bladder. *d*, Placenta prævia. *e*, Inflammation of bowels and kidneys, *f*, Exhaustion. *g*, Sudden fit tenth day. *h*, Ruptured uterus. *i* Acute general tuberculosis. *j*, Acute yellow atrophy of liver. *k*, Hæmorrhage, placenta prævia, and fibroid. *l*, Convulsions, abscess of liver, and gall-stones. *m*, Accidental hæmorrhage. *n*, Cerebral apoplexy, convulsions. *o*, Epileptiform convulsions (cephalotripsy). *p*, Cystitis and tuberculous kidneys. *q*, Acute lobar pneumonia. *r*, Exhaustion, contracted pelvis. *s*, Post-partum hæmorrhage. *t*, Peritonitis (forceps—decapitation). *u*, Septicæmia, placenta prævia. *v*, Septicæmia (repeated attempts with forceps before admission). (The last three cases were sent into hospital from the out-patient department.)

Deliveries = 5766. Deaths from septic causes = 3 in 11 years.

The deaths from septic causes are equivalent to a death-rate of 0·5 per 1000 deliveries. This is, indeed, a wonderful result and shows a vast improvement upon the death-rate from septic causes in the preceding 13 years.

TABLE XXIX.—SHOWING THE PUERPERAL MORTALITY IN THE OUT-PATIENT DEPARTMENT OF THE GENERAL LYING IN HOSPITAL, LONDON, FROM 1880 TO 1902.

Year	1880	1881	1882	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902
Deliveries	630	610	729	808	741	852	866	882	911	1094	1055	1248	1291	1527	1624	1782	1533	1845	1791	1667	1787	1887	1889
Deaths from septic causes	—	—	—	—	—	—	*a.* 1	—	—	*d.* 1	—	*a.* 1	—	—	—	—	—	—	—	—	—	—	—
,, ,, non-septic causes	—	—	—	—	—	—	*b.* 1	—	—	*c.* 1	—	—	—	*e.* 1	*e.* 1	*f.* 1	*g h.* 2	—	*i.j.* 2	—	—	—	*k.l.m.* 3
Cause not recorded	—	—	—	1	—	2	—	—	2	—	1	—	—	4	—	—	—	—	—	—	—	—	—
Total deaths	—	—	—	1	—	2	2	—	2	2	1	1	—	5	1	1	2	—	2	—	—	—	3

a, Septicæmia. *b*, Heart displaced through congenital deficiency in pericardium into pleural cavity during fit of vomiting. *c*, Pneumonia. *d*, Peritonitis. *e*, Hæmorrhage. *f*, Exhaustion and pneumonia. *g*, Convulsions (baby unborn). *h*, Acute bronchitis—starvation. *i*, Eclampsia. *j*, Accidental hæmorrhage. *k*, Bronchitis and pneumonia. *l*, Pleurisy and pneumonia. *m*, Influenza and pneumonia.

Deliveries = 29,346. Length of time 23 years. Deaths from septic causes = 3.

The total deaths are equivalent to a death-rate of 0·8 per 1000 deliveries. The deaths from septic causes are equivalent to a death-rate of 0·10 per 1000 deliveries. These, indeed, are wonderful results.

Unqualified medical students have occasionally been blamed for being the cause of the spread of puerperal septicæmia and for the occurrence of other deaths in childbed, but the above figures will, I think, exonerate them and this is really why I include them. Here is an instance where 18,256 women were delivered and attended by medical students alone and the results are truly remarkable—viz., a death-rate of 0·6 per 1000 deliveries, or 1 in 1659. On reference to Table XXI. it will be seen that four cases of septicæmia and one of pyæmia occurred in the year 1898. On inquiry I find that these deaths occurred in four different months—viz., May, one (pyæmia); September, one (septicæmia); November, two (septicæmia); and December, one (septicæmia). Now, as the clerks are only on duty for one month at a time the deaths could not have occurred in the practice of one student. In the case of pyæmia no examination per vaginam was made, the child being born as the student entered the house and the mother being in a state of great destitution. In the two cases of septicæmia that occurred in November birth had taken place before the arrival of the accoucheur. The women delivered by these students were inhabitants of three of the lowest districts in the metropolis. One of the districts has been described thus: "Very overcrowded, with narrow streets, old and tumbled down houses, and very dirty. People poor and very poor, also dirty and very dirty. Some of them are fairly clean considering their surroundings. As a rule there are several families even in the smallest houses, and it is not uncommon to find husband and wife with three or four children living in one room, and with three, four, or half a dozen in the next room. The children sleep on various kinds of beds, including boxes. There are several large blocks of model dwellings in this district, and in these the people are in a much cleaner condition. Most of the cases are English." In the second district a somewhat similar condition of things prevailed and here there were more blocks of dwellings and the people were cleaner. In the third district conditions were better and there were few blocks of buildings. A large number of Italians lived there. The husbands of the women so attended included labourers of all descriptions, carmen, hawkers, &c., and many of them seemed to be always out of work. A large number of women had to work for their children and husbands as well.

Such instances as the above could be multiplied almost indefinitely, but they all point in the same direction, and the experience of the above-named lying-in institutions is not at all exceptional. Those who desire to pursue this subject further I would refer to the excellent contributions of Dr. C. J. Cullingworth, Dr. H. F. Champneys, Dr. Boxall, and others. It is the same, I understand, in all lying-in hospitals where aseptic principles have prevailed, both at home and abroad, but I have no figures to prove this statement.

Dr. Boxall, in his "Antiseptics in Midwifery," when dealing with the mortality at the General Lying-in Hospital, London, observes:—

> Since 1879, when the institution was reopened, the service has been conducted on aseptic principles. Mark the difference in the mortality then. The value of adaptation of Listerian measures to obstetric practice is evident from the decline in the death-rate which ensued.

Tables XXVI. and XXVII., giving the cause of each fatality since the hospital was reopened, show at a glance that it is mainly by the elimination of septic causes that improvement has been effected. He further remarks:

> It will be observed, moreover, that the advantage gained at the outset has since been still further improved upon. The secondary improvement followed upon the increased experience in the use of antiseptic measures and their more perfect application since their first adoption. For instance, in the early part of 1884, corrosive sublimate solution was substituted for carbolic and Condy's fluid as the general antiseptic employed with very marked benefit. Since that time (1884-1892) only three deaths have taken place from septic causes among 3778 patients delivered, and none during the last four years (1889-1892). I may mention, however, that these fatalities were the result of dearly bought experience. One death took place when sublimate douche solutions of weaker strength were tentatively employed and the remaining two in which salufer douching was tried instead of sublimate.

By far better results have been obtained during the last decade at this lying-in hospital, and the deaths from septic causes at this institution have only amounted to 0·5 per 1000 deliveries. The precise nature of the antiseptic measures to which these wonderful results have been due varies in different institutions, and varies also in the same hospital from year to year. It will therefore serve no purpose to attempt to describe them and their use in detail, for the object at which they all aim is the same. As to the best methods of effecting this object, there is, as I have already said, some difference of opinion.

I will now refer briefly to the death-rate from septic causes

TABLE XXX.—*Showing the Number and Nature of Operations and the Number of Deaths at the General Lying-in Hospital, London, from 1898 to 1903.*

Year.	Forceps.	Embryotomy.	Craniotomy.	Induction.	Version.	Rotation.	Deaths (maternal).
1898	62	—	6	19	1	3	3*
1899	69	1	5	16	6	2	1†
1900	64	—	4	19	5	1	1‡
1901	50	2	3	24	4	—	3‖
1902	38	2	4	13	5	1	1¶
1903	58	2	5	10	11	2	3**
Totals ...	341	7	27	101	32	9	12

* Two after forceps (one spontaneous rupture of the uterus and accidental hæmorrhage, and one comatose when sent in). One after craniotomy (died on the eighth day; no cause found; post mortem non-septic).
† After rotation ante-partum hæmorrhage (four and a half pints).
‡ After craniotomy (convulsions).
‖ Two after forceps (one phthisis and one cystitis and tuberculous kidneys). One after craniotomy (eclampsia).
¶ After craniotomy (syncope).
** One after embryotomy (peritonitis). One after version (placenta prævia) One after craniotomy (eclampsia; convulsions).

TABLE XXXI.—SHOWING THE DEATHS FROM SEPTIC AND NON-SEPTIC CAUSES IN CONNEXION WITH A WELL-KNOWN LONDON HOSPITAL WITH A MEDICAL SCHOOL ATTACHED, FROM 1893 TO 1903.

Year	1893 (11 months)	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903
Deliveries	1613	1636	1523	1719	1750	1718	1740	1758	1674	1587	1538
Deaths from septic causes {	*s.* 2	*s.* 1	—	—	—	*s.t.* 5	—	*s.* 1	*s.* 1	*s.* 1	—
" " non-septic causes {	*f.h.* 3	*l.p.* 2	*p.q.* 2	*d.j.k.* 3	*e.* 1	*e.j.* 2	*b.p.* 2	*i.* 1	*c.d.m.n.* 5	*a.g.l.n.p.* 6	*c.* 1
Total deaths	5	3	2	3	1	7	2	2	6	7	1

a, Cerebral symptoms, probably mania. *b*, Morbus cordis. *c*, Syncope. *d*, Phthisis. *e*, Acute bronchitis. *f*, Pneumonia. *g*, (?) Uræmia. *h*, Eclampsia. *i*, Convulsions. *j*, Placenta prævia. *k*, Ante-partum hæmorrhage and post-partum hæmorrhage. *l*, Post-partum hæmorrhage. *m*, Accidental hæmorrhage. *n*, Ruptured uterus and carcinoma. *p*, Pulmonary embolism. *q*, Enteric fever. *s*, Septicæmia. *t*, Pyæmia.
Deliveries = 18,256. Deaths from septic causes = 11.

The deaths from all causes represent a death-rate of 2·13 per 1000 deliveries. The deaths from septic causes represent a death-rate of 0·6 per 1000 deliveries. Concerning the deaths in the foregoing table it may be pointed out that the following 11 cases were admitted to the hospital where the patients died. Five cases of septicæmia, one of pyæmia, two of phthisis, one of eclampsia, one of pneumonia, and one of pulmonary embolism. In one case showing cerebral symptoms, probably melancholia, the patient died on the twentieth day, after being discharged apparently well and being under the care of the parish medical officer.

at the external department of Queen Charlotte's Hospital, at the external department of the General Lying-in-Hospital, London, and at the midwifery department of a London hospital. In the first of these during the period of five years 1898-1902 there were 5282 deliveries and three deaths. This is equivalent to 0·5 per 1000 deliveries. In the second, during a period of 23 years (1880-1902) there were 29,346 deliveries and three deaths only. This is equivalent to 0·10 per 1000 deliveries, or 1 in 10,000—a wonderful result. In the third, during a period of 11 years (1893-1903) there were 18,256 deliveries and 11 deaths. This is equivalent to 0·6 per 1000 deliveries. Excluding the three deaths of women when the child was born before the student arrived the death-rate becomes 0·4 per 1000 deliveries. Since it is possible in the external departments of lying-in hospitals and in the midwifery department of a large London hospital, as has been demonstrated, to obtain by means of aseptic and antiseptic precautions such wonderful results as these, surely we have a right to expect equally good results in midwifery practice generally. In the case of the external department of Queen Charlotte's and the General Lying-in Hospitals the women are attended and nursed in their own homes by trained and skilled midwives. In the case of the London hospital referred to the women are attended in their own homes by unqualified medical students. The only difference between the conditions under which these women are confined and those confined in private practice generally is that the midwives are trained and skilled in their work and can procure medical assistance whenever necessary and at short notice, whereas the large majority of midwives who attend labours on their own responsibility are neither trained nor skilled and, moreover, they possess no knowledge whatever of the true meanings and the application of asepsis and antisepsis. When, therefore, the time arrives when all midwives will be trained and skilled we have a right to expect equally good results in private practice generally, provided medical assistance, if and when required, can be obtained at short notice.

MORTALITY AT DIFFERENT AGES OR THE RELATION OF AGE TO THE MORTALITY FROM PUERPERAL SEPTIC DISEASES AND ACCIDENTS OF CHILDBIRTH.

Deaths in childbirth happen in many ways and different causes operate with variable force at different periods. It has been estimated that the number of women at different ages bearing children are as follows: From 15 to 25 years only 1 in 16 bears a child in the year and at 45 years of age and upwards the proportion is inconsiderable, while at the ages of from 25 to 35 years 1 in every 4 women bears a child in the year, and at 35 to 45 years of age the proportion is 1 in 6. Therefore, the ages from 25 to 35 years represent the period of life in which British women bear the greatest number of children and it is calculated that the mortality of women at that age from all causes is nearly 1 per cent. On this subject important information is found in a letter addressed by Dr. Farr to the Registrar General in 1864 and published in the appendix to that officer's seventeenth and other annual reports—viz., the twentieth, twenty-first, twenty-second, and thirtieth. In this letter Dr. Farr asks, "What is the danger of death by childbirth among women of different ages who bear children during the year?" This is a difficult question which is of practical importance both in medical science and in the business of life insurance. The defect in the English schedule, which as yet contains no column for the ages of the parents of the children registered, renders it impossible to answer this question with precision. It will, however, be useful to obtain an approximate answer and this we have been able to give by determining the probable proportion of women who bear children at each age from the Swedish returns and by applying the fraction expressive of this proportion to the English women living in 1851 at the corresponding age the probable number of them who become mothers every year is determined. The total number thus determined for the year 1851 is 609,845, while the actual average number of the births in the seven years by the returns was 603,045. It is thus evident that the estimate differs to no great extent from the facts and it may be assumed that the births, corrected for twins, triplets, and stillborn children, in England would represent nearly 609,845 child bearings. The following sets of tables extracted from the data supplied by Dr. Farr show the mortality from puerperal fever and from accidents of childbirth for different periods. It will be unphilosophical, however, to draw from these tables even a presumption as to influence of age on the mortality from septic diseases until careful consideration had been made of *all* the influences, besides age, having a bearing upon it, such as primiparity, multiparity, the number of preceding pregnancies, and so forth. To make a satisfactory comparison of the mortalities of women of different ages it is necessary to compare with one another masses of women of different ages in each successive pregnancy. They are given, however, for what they are worth and will doubtless be of some value.

TABLE XXXII.—*Showing Estimated Number of Women Bearing Children, Deaths from Puerperal Fever, and Death-rate for 1848-1854 (seven years).*

Ages.	Estimated number of women bearing children.	Deaths from puerperal fever.	Annual mortality from puerperal fever per 1000 mothers.
15-25	107,440	2085	2·77
25-35	328,720	3401	1·48
35-45	166,140	1791	1·54
45-55	7,545	86	1·63
15-55	609,845	7363	1·72
	1855-1856 (two years).		
15-25	107,440	619	2·69
25-35	328,720	942	1·36
35-45	166,140	565	1·62
45-55	7,545	27	1·72
15-55	609,845	2143	1·67
	1855-1857 (three years).		
15-25	107,440	841	2·46
25-35	328,720	1302	1·24
35-45	166,140	797	1·51
45-55	7,545	42	1·75
15-55	609,845	2982	1·54
	1855-1858 (four years).		
15-25	107,440	1146	2·50
25-35	328,720	1777	1·27
35-45	166,140	1078	1·52
45-55	7,545	49	1·52
15-55	609,845	4050	1·55
	1855-1859 (five years).		
15-25	107,440	1502	2·60
25-35	328,720	2362	1·34
35-45	166,140	1360	1·52
45-55	7,545	64	1·52
15-55	609,845	5283	1·61

TABLE XXXIII.—*Showing Estimated Number of Women Bearing Children, Deaths from Puerperal Fever, Accidents of Childbirth, and Death-rates for 1848-1854 (seven years).*

Ages.	Estimated number of women bearing children, 1851.	Deaths from puerperal fever.	Deaths from accidents of childbirth.	Annual rate of mortality from puerperal fever per 1000 mothers bearing children.	Annual rate of mortality from accidents of childbirth per 1000 mothers bearing children.
15-25	107,440	2,085	2,940	2·77	3·91
25-35	328,720	3,401	6,378	1·48	2·77
35-45	166,140	1,791	5,568	1·54	4·79
45-55	7,545	86	380	1·63	7·20
15-55	609,845	7,363	15,266	1·73	3·58

1855–1867 (13 years).

15–25	116,474	4,023	5,731	2·66	3·78
25–35	368,487	6,624	11,880	1·38	2·48
35–45	192,979	3,533	10,493	1·41	4·18
45–55	8,623	156	604	1·39	5·39
15–55	686,563	14,336	28,708	1·61	3·22

TABLE XXXIV.—*Showing Estimated Number of Women Bearing Children and Causes of Death at Various Ages, for 1855–1857 (three years).*

Ages.	Estimated number of women bearing children, 1851.	Deaths.				Annual rate of mortality from "accidents of childbirth" per 1000 mothers.			
		Placenta prævia and flooding.	Puerperal mania.	Puerperal convulsions.	Rupture of uterus.	Placenta prævia and flooding.	Puerperal mania.	Puerperal convulsions.	Rupture of uterus.
15–25	107,440	127	52	295	10	0·68	0·28	1·58	0·05
25–35	328,720	458	119	213	44	0·91	0·24	0·42	0·09
35–45	166,140	561	42	106	46	2·22	0·17	0·42	0·18
45–55	7,545	35	4	6	2	2·82	0·32	0·48	0·16
15–55	609,845	1181	217	620	102	1·23	0·23	0·65	0·11
1855–1858 (four years).									
15–25	107,440	166	72	390	12	0·69	0·30	1·61	0·05
25–35	328,720	632	169	270	61	0·95	0·25	0·40	0·09
35–45	166,140	784	95	152	56	2·29	0·17	0·44	0·16
45–55	7,545	48	4	8	2	2·91	0·24	0·48	0·12
15–55	609,845	1630	340	820	131	1·28	0·24	0·64	0·10
1855–1859 (five years).									
15–25	107,440	220	102	481	16	0·74	0·35	1·63	0·05
25–35	328,720	806	215	342	78	0·97	0·26	0·41	0·09
35–45	166,140	1014	80	183	61	2·37	0·19	0·43	0·14
45–55	7,545	61	4	11	3	3·07	0·20	0·55	0·15
15–55	609,845	2101	401	1017	158	1·33	0·25	0·64	0·10

Remarks.—Flooding increases rapidly with age and so does rupture of the uterus. The organs wear out. Puerperal convulsions are much more fatal in the first period (from 15 to 25 years of age). The muscular irritability is greatest. Puerperal mania is probably of most frequent occurrence in the first period but most fatal in the last period.

THE DIAGNOSIS OF TUMOURS IN THE UPPER RECTUM AND SIGMOID FLEXURE BY MEANS OF THE ELECTRIC SIGMOIDOSCOPE.

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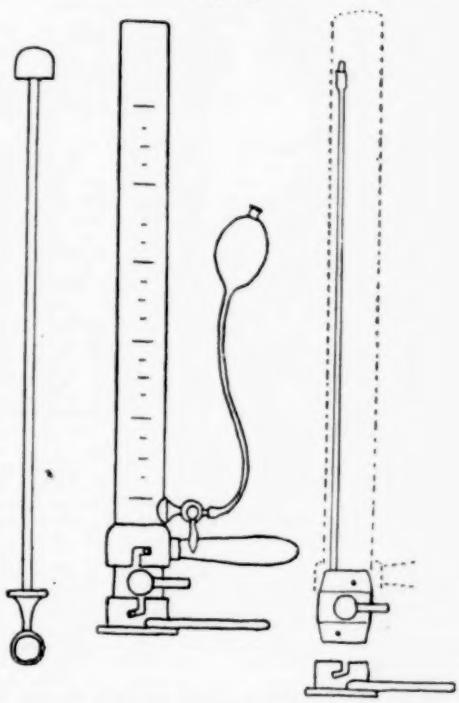
THE human mind is so constituted that we always experience a certain pleasure when we have succeeded in obtaining access to some spot hitherto difficult or impossible to explore. And in medicine and surgery the perfection of a method by which we are enabled accurately to explore hitherto inaccessible portions of the human body always arouses our interest and helps to perfect our art.

The accurate diagnosis of tumours in the upper part of the rectum and in the sigmoid flexure has hitherto been difficult and unsatisfactory. This is principally because it has not been possible to obtain direct evidence of their presence in these regions and the diagnosis of such tumours has in most cases had to be made almost entirely from the symptoms. A tumour high up in the rectum or in the lower loop of the sigmoid flexure is quite out of reach of the finger and is not palpable through the abdominal wall, even under an anæsthetic, unless it be of considerable size. Occasionally such tumours can be detected by a careful bimanual examination when the patient is under an anæsthetic and the abdominal walls are well relaxed. As a rule, however, the diagnosis has to be made from the symptoms. This is unfortunate, as commonly symptoms sufficiently definite to enable a diagnosis of rectal new growth to be made are not present until the growth has reached a considerable size and probably ulcerated into the bowel; that is to say, until the most favourable period for its removal has passed. Even when the diagnosis of a tumour in the upper rectum or sigmoid flexure can be made from the symptoms it is still only possible to say that such a growth exists and we are ignorant as to the exact position of the growth and as to whether it is fixed or moveable, and are therefore unable to ascertain without opening the abdomen whether it can be removed.

What has been wanted is a method by which we can not only detect the presence of a growth in this region but also ascertain its position, nature, and mobility. The introduction of Kelly's rectal tubes to some extent solved this difficulty but the long Kelly's tube has several disadvantages. It is often very difficult to pass and there is danger in passing it that the end may cause injury to the wall of the bowel, especially as in some of the cases where the growth has ulcerated the walls may be rotten and easily torn. In some cases it is impossible to get the bowel to inflate properly after the tube is passed and unless the bowel is inflated nothing can be seen except the mucous membrane in contact with the end of the tube. Again, it is very difficult to obtain any proper illumination of the bowel at the end of so long a tube, and although the short Kelly's tubes have proved very useful the long ones have not proved to be of much practical value.

Recently several improved sigmoidoscope tubes have been made. The best of these was invented by Professor Strauss

FIG. 1.



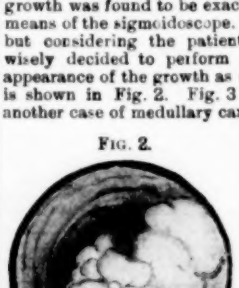
of Berlin. This tube is shown in Fig. 1. It is 30 centimetres long and about two centimetres in diameter. There is an electric lamp inside the tube and about one

inch from the end. The back end of the tube is closed by a glass window and there is a tap to which an indiarubber bellows can be attached so that the bowel can be inflated. This instrument is in many ways a great improvement upon its predecessors. Some of the earliest electric sigmoidoscopes were not sterilisable, as the electric light and connexions were an integral part of the tube. In this instrument the lamp can be removed and the tube sterilised in the ordinary way. One of the great features of this sigmoidoscope is the method of passing it; practically speaking, after the tube has passed the first six inches the tip does not touch the rectal wall; it is therefore impossible for the tube to cause any damage to the wall of the bowel, however diseased the latter may be. The tube is passed as follows. The patient is placed in the knee-elbow position or in the semi-prone position with the buttocks raised on a cushion. The lamp portion of the tube is removed and the obturator inserted. The tube is then warmed by holding it for a moment in a stream of hot water—this is better than dipping it into water as the interior of the tube is not wetted—and then thoroughly vaselined. The tube is passed gently into the rectum for about six inches; the obturator is then removed and the lamp and back glass are inserted. If on looking into the tube the mucous membrane is seen to be in contact with the end the rectum is inflated by a squeeze of the bellows so as to push away the mucous membrane. The tube is then pushed into the hollow of the sacrum by tilting the point upwards; this enables the point of the tube to clear the anterior rectal valve. It must then be tilted downwards so as to clear the sacral prominence and enter the last loop of the sigmoid; it is also usually necessary to turn the point slightly to the right side. The tube should be passed by looking for the lumen of the gut and when this is seen giving a light puff with the bellows so as to open up the bowel, the tube being then pushed into the dilated portion. This procedure is repeated until the tube has been passed to its full length. A lot of air should not be pumped into the rectum, as this will cause the patient considerable discomfort, but the bowel should be inflated by light puffs with the bellows so as to push aside the walls of the bowel in front of the tube. Sometimes if the growth is on the anterior wall of the bowel it may be passed over during the passage of the tube without being seen, as one naturally follows the posterior wall while passing the tube. While withdrawing the tube, however, the whole lumen of the bowel comes into view and any growth is easily detected. When a growth is seen its position and size are easily ascertained and by pushing it gently with the end of the tube one can tell whether it is fixed or moveable.

It is possible with this instrument to obtain a view of the bowel as high as the top of the sigmoid flexure, though the distance to which one can pass the tube depends very much upon the mobility of the sigmoid flexure and upon its having a long mesentery. In one case in which there was an atonic condition of the bowel I was able to see well into the descending colon, but I believe that this is only possible in exceptional cases. By removing the window at the back of the tube and passing suitable instruments down it applications may be made to the growth or even pieces removed for microscopical examination. It is very important not to remove the window until the air pressure in the tube has been reduced, otherwise the sudden rush of air may prolapse the mucous membrane into the end of the tube and injure it. It needs a certain amount of practice before this instrument can be used satisfactorily. In this respect it resembles the cystoscope, laryngoscope, ophthalmoscope, &c., all of which need practice not only in using them but in interpreting what is seen before their real value can be appreciated. The passage of the sigmoidoscope is not in the least painful and but slightly uncomfortable; it is not necessary to administer an anæsthetic. The following case demonstrates very well the value of this method of diagnosis.

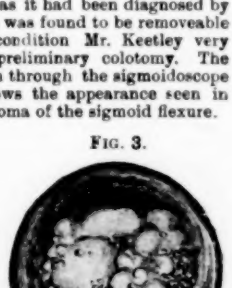
The patient was a man, aged 71 years. When I first saw him he complained of constant diarrhœa and the passage of blood and slime by the rectum. He stated that these symptoms had only developed during the last two or three months and that he had previously been in good health. From his symptoms it seemed almost certain that he was suffering from a carcinoma of the rectum. On examining the rectum with the finger nothing could be felt and on examining with a six inch rectal tube nothing could be seen. Palpation of the abdomen and a bimanual examination also gave negative results, although the abdominal walls were very lax. As I felt certain that there must be a growth somewhere either high up in the rectum or in the sigmoid flexure I examined him with the sigmoidoscope a week later at St. Mark's Hospital. I was then able to see the growth, which was of about the diameter of a two shilling piece; it was situated on the anterior wall of the bowel at the lower end of the sigmoid flexure and on gently pressing it with the end of the tube I was able to ascertain that it was moveable. About a week later, while the patient was making up his mind as to whether he should submit to an operation, symptoms of intestinal obstruction appeared and he was admitted into the West London Hospital where he was operated upon by Mr. C. R. B. Keetley who, knowing that I was interested in the case, kindly asked me to be present at the operation. On opening the abdomen the growth was found to be exactly as it had been diagnosed by means of the sigmoidoscope. It was found to be removeable but considering the patient's condition Mr. Keetley very wisely decided to perform a preliminary colotomy. The appearance of the growth as seen through the sigmoidoscope is shown in Fig. 2. Fig. 3 shows the appearance seen in another case of medullary carcinoma of the sigmoid flexure.

FIG. 2.



Appearance of the growth seen through the sigmoidoscope.

FIG. 3.



Medullary carcinoma of the sigmoid flexure of a man aged 39 years, seen through the sigmoidoscope.

I believe if all patients were examined in this way who complain of symptoms which may be the result of a new growth in the rectum or sigmoid flexure—such as the recent onset of obstinate constipation without obvious cause, the frequent passage of mucus or of blood and mucus, frequent colic only relieved by large doses of aperients, &c.—that many cases of malignant disease of the lower bowel would be detected at an early stage when complete removal is still possible, instead of the majority of such cases only being diagnosed when removal is very dangerous or altogether impossible as is the case at present.

Cavendish-place, W.

STRANGULATION OF THE FULLY DESCENDED TESTICLE FROM TORSION OF A PEDUNCULATED MESORCHIUM.

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SURGEON TO THE OUT-PATIENT DEPARTMENTS OF THE WESTERN INFIRMARY AND OF THE ROYAL HOSPITAL FOR SICK CHILDREN, GLASGOW.

THE rarity of the above condition and the special features of this case are my excuse for publishing the following. I shall first briefly describe the case and shall then draw attention to some points in connexion with it.

The patient was a baby, aged seven months, who was brought to the out-door department of the Royal Hospital for Sick Children, Glasgow, on Sept. 10th, 1903, on account of swelling of the scrotum. The mother stated that the swelling had been observed on the previous day. No cause for the condition was known and it did not seem to trouble the patient in any way. On examination the left half of the scrotum was found to be much swollen, of the shape and size of a Tangerine orange, and very hard; the skin was bright red in colour, thickened and glazed, and hotter than the surrounding parts, and apparently acutely

inflamed. The swelling and induration extended some way up on the cord but did not reach the external inguinal ring. Examination did not cause any pain. Hernia was excluded and it was thought that the condition was one of acute orchitis.

In view of the acuteness of the inflammation and the high degree of tension in the part it was thought proper to incise the swelling there and then and, chloroform having been administered, this was done. A vertical cut was made in the front of the swelling and exposed very œdematous subcutaneous tissue which bled freely. Successive cuts were made through the layers of the scrotum until the tunica vaginalis was opened. The testicle when exposed was found to be swollen, the body being of a purple colour and having engorged veins on its surface; behind was the much enlarged epididymis, resembling very dark blood clot. No escape of fluid was observed when the tunica was opened. The strangulated organ, with its tunica, was removed by peeling the latter off from the inner surface of the scrotal sac. This was easily done on account of the œdematous condition of the scrotal tissues. The cord was ligatured above the pointed upper end of the tunica. The cavity left was packed with iodoform gauze and the incision was sutured so as to leave the gauze protruding from its lower end. Uneventful healing occurred.

On examination of the specimen after removal it was found that the testicle was connected with the posterior part of the tunica vaginalis by a narrow pedicle, instead of, as is usual, by an attachment extending almost the complete length of the epididymis. The pedicle was at the upper pole of the organ and lay to the inner side of the gland. It had undergone a complete twist from within outwards (from right to left) so that the body of the testis lay in its proper situation, anterior to the epididymis. On untwisting the pedicle it was markedly white and bloodless, contrasting with the discoloured testicle; it was flattened from side to side and had a vertical measurement of four millimetres. The upper end of the tunica tapered and extended a short distance up on the front of the cord. The cord presented no apparent abnormality. The testicle measured as follows: vertically, 1·75 centimetres; transversely, 1·2 centimetres; antero-posteriorly (including epididymis), 2·2 centimetres; and the body of the testis alone, 1·4 centimetres. Dr. J. H. Teacher very kindly made a microscopical examination of the testicle. He reports that "the larger lobe is testicle, in a state of necrosis. The smaller lobule is epididymis. Between the two is a broad area of œdematous, blood-infiltrated, and highly congested connective tissue which corresponds to the rete testis (hilum of the testicle) very much swollen. The epididymis is more closely incorporated with the testicle than is normal, owing to adhesion between the adjacent surfaces; the line of this adhesion is very plainly indicated by the remains of the two surfaces and a bed of leucocytes in and between them. The epididymis is less necrotic than the testis and its structure is plainly recognisable. The connective tissue is infiltrated with extravasated blood in large amount."

Etiology.—Strangulation of the testicle from torsion of the cord is rare and most of the cases recorded have occurred in testicles which were incompletely descended. The chief predisposing cause of torsion is abnormal mobility and this may come about from abnormal formation of the cord, or of the gubernaculum, or from excessively large and roomy tunica vaginalis. Scudder[1] declares that "in all recorded cases of torsion of the cord operated upon, a deformity or a delay in development, or some abnormal condition about the testis, has been found. In all cases the testicle has been discovered to be freely moveable within the tunica vaginalis." Descent was incomplete "in 47 per cent." and "in every case there was a long mesorchium." He quotes Bramann to the effect that "more or less incomplete fixation of the testicle is seen in almost all anomalies of its development and in all disturbances of its descent." (If Bramann refers to incomplete fixation within the tunica I do not agree with the concluding phrase of the above sentence.) In the opinion of McAdam Eccles[2] torsion is more common in the undescended organ and as predisposing causes there are, amongst others, "practical absence of a mesorchium," and absence of the middle band of the gubernaculum. According to Jonathan Hutchinson, jun.,[3] "torsion of the cord occurs chiefly in those cases where the testis is abnormally mobile, either from imperfect descent or from absence of the usual adhesions to the bottom of the scrotum. These latter are, it is well known, largely the remains of the middle part of the gubernaculum, and vary much in their development in different individuals."

As will be seen from the illustration (Fig. 1), in the case

FIG. 1.

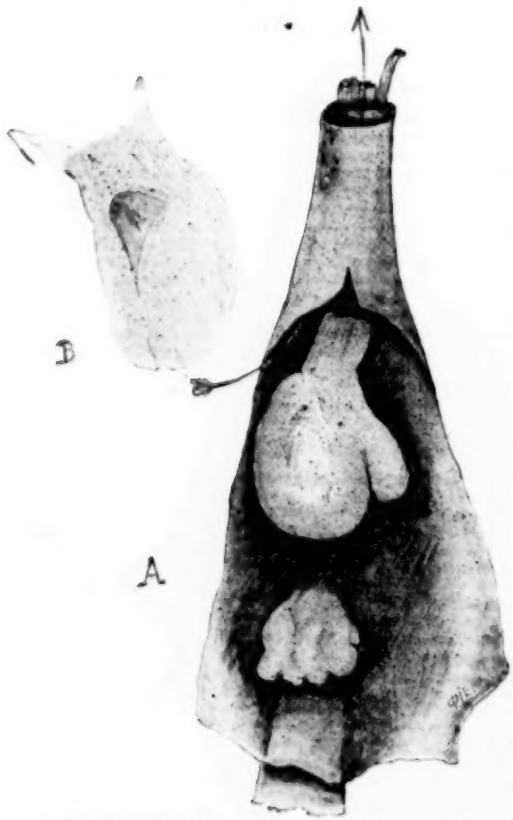
The upper figure represents the testicle and tunica vaginalis (from the mesial aspect) as on removal; the pedicle shows the torsion; the body of the testis is directed forwards and upwards. The lower figure shows the specimen from the lateral aspect, with the twist undone.

now reported the testicle hangs loose in the vaginal sac, the attachment being at the upper pole. This position of the gland corresponds with what Curling[4] has designated "reversion" of the testis, in which the upper pole of the gland is directed downwards along with the globus major, while the vas deferens springs from the tail of the epididymis, above the testicle. He continues: "This disposition of the organ does not affect the relations of the tunica vaginalis to the testicle and epididymis."[5] In my case, however, the relations are very much altered, the epididymis being wholly intratunical. The case reported by Lexer[6] bears a superficial resemblance to this but on detailed examination it presents a quite different arrangement. The patient, aged 60 years, had noted an enlargement of the left scrotum three years previously, which came on quickly in two weeks' time. It was subject to repeated sudden increase in size during exertion but always returned again to its former dimensions. Two weeks before Lexer saw him there had been a sudden increase, accompanied by severe pain passing along the cord into the abdomen. The swelling was oval and smooth and of the size of a child's head; the scrotum over it was slightly reddened and œdematous; the testicle was not palpable but the cord was. Tapping withdrew bloody serum. Incision showed a bluish-black, glistening, gut-like structure free in the tunica, to which it was attached by a twisted stalk of the thickness of the little finger; the twist was from without inwards. The necrosed testicle was removed with the parietal tunica. The mass proved on dissection to be testis plus a blood cyst; the epididymis lay behind and outside of the tunica. The pedicle contained the abnormally lengthened vasa efferentia passing from the testis to the epididymis. Lexer advances the theory that the epididymis and vas deferens had descended first, owing to looseness or lengthening of the vasa efferentia. The testicle had descended later and had projected completely into the tunica. This, then, is not an example of "reversion."

[1] Scudder: Annals of Surgery, vol. xxxiv., 1901, p. 234.
[2] McAdam Eccles: The Imperfectly Descended Testis. London, 1903.
[3] Jonathan Hutchinson, jun.: Atlas of Pathology, New Sydenham Society, 1896, Fasc. X.
[4] Curling: Diseases of the Testis, p. 60. Fourth edition. London, 1878.
[5] Loc. cit., p. 61.
[6] Lexer: Archiv für Klinische Chirurgie, 1894, Band 48, S. 201.

In connexion with the suspension of the testicle in the peritoneal pouch by a pedicle, I may mention the following case which occurred recently in the clinic of Sir Hector Cameron in the Western Infirmary and which I had the opportunity of dissecting. The patient was aged 15 years and the left testicle lay in the inguinal canal. Castration was performed in the course of operating for the radical cure of hernia on this side. The processus was widely open and the testicle, which was about half the size of its fellow (which was in the scrotum) was freely moveable, being attached to the wall of the processus by a stalk 3·5 centimetres long and 1·5 centimetres broad (Fig. 2, A). There was

FIG. 2.

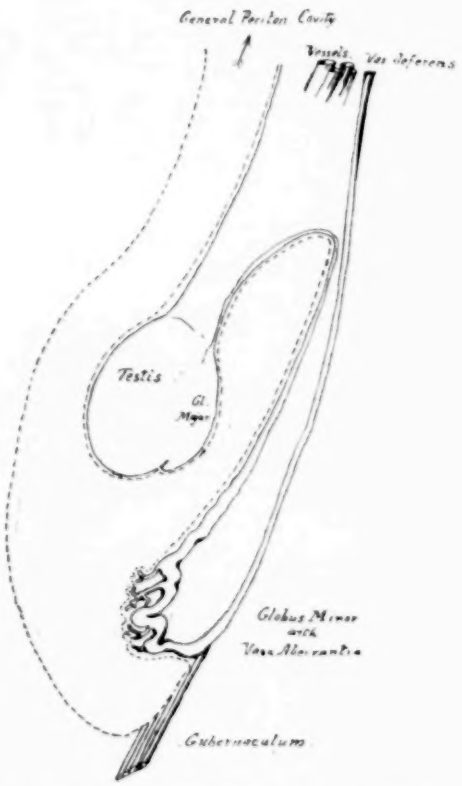


A, Testicle hanging in processus vaginalis. At the upper end are seen the elements of the cord behind the peritoneum of the processus, which is open, as indicated by an arrow. Below the testicle is the elevation of the serous membrane by the globus minor, and below this the gubernaculum. B, Digital pouch on the inner aspect of the testicle. The arrow shows the direction of the cavity. The testicle measured 3 centimetres vertically and 2·5 centimetres antero-posteriorly, including the epididymis. The pedicle, which was 3·5 centimetres in length, had a diameter of 1·5 centimetres. (Sir Hector Cameron's case. Compare with Fig. 3.)

a small epididymis on the posterior edge of the organ and the digital pouch was well marked on the inner aspect, being directed upwards for a distance of 1·5 centimetres (Fig. 2, B). The peritoneal wall was quite smooth behind the testis and its pedicle but lower down it was thrown into an irregular elevation from which the gubernaculum passed downwards towards the scrotum. On dissection the epididymis was found continued up in the pedicle to the wall of the processus where it turned down and ended in the globus minor at the elevation in the wall corresponding to the attachment of the gubernaculum. From this point it turned sharply up and was traced to the cord in the upper part of the specimen (Fig. 3).

In reading the literature of cases of torsion of the cord one is struck with the absence of detailed descriptions of the arrangement of the cord whether in a pedicle or otherwise. This want in the reports gives often a very indefinite impression of the conditions existing in the individual cases.

FIG. 3.



Scheme of epididymis, &c., in pedunculated testicle from the inguinal canal. The peritoneum is represented by the dotted line. (Sir Hector Cameron's case.)

Another source of confusion, however, is the different use of the term "mesorchium" by different observers. For example, Scudder[7] does not describe, but figures his case as if possessed of an intratunical pedicle. Whipple's case[8] was reported on by Mr. J. H. Targett as one in which there was twisting of the epididymis "or mesorchium." Bryant[9] speaks of a "long mesorchium," and Hulke[10] uses the same expression. Page[11] simply mentions that the twist occurred at the external ring and was undone by the motion for taking out a screw nail; no mention is made of the relations of the cord to the processus vaginalis. Johnson[12] describes "gangrenous series of twists of the cord" but makes no mention of peritoneum. Nash[13] treated his case by untwisting by external manipulation. Bardella[14] describes a case of a fully descended testicle undergoing necrosis from torsion following trauma; there was "complete absence of the mesorchium." Contrasting with these there is Langton's[15] very clear

[7] Loc. cit.
[8] Whipple and Targett: THE LANCET, May 16th, 1891, p. 1096.
[9] Bryant: THE LANCET, Feb. 27th, 1892, p. 472.
[10] Transactions of the Royal Medical and Chirurgical Society, vol. xlix., 1866, p. 193.
[11] Page: THE LANCET, July 30th, 1892, p. 257.
[12] Johnson: Annals of Surgery, vol. xvii., 1893, p. 282.
[13] Nash: Brit. Med. Jour., 1893, vol. i., p. 742.
[14] Bardella: Gazetta degli Ospedali e delle Cliniche, 1900, reported in Jahresbericht für Chirurgie, VI. Jahrgang, 1900, S. 901.
[15] Langton: St. Bartholomew's Hospital Reports, 1881, vol. xvii., p. 188.

description: "The viscus was very freely moveable in the sac of the tunica vaginalis, owing to an unusually extensive reflexion of the visceral layer of the serous covering." The testis was simply suspended in the sac "by the commencement of the cord." Then again, Taylor[16] describes a case occurring four hours after birth. The testis when removed was round, smooth, and very tense, the insertion of the cord appearing like that of the "stalk of an apple."

In view of the above confusion I would suggest that excluding the conditions found in intra-uterine life previously to the descent of the organs the relation of the descended testicle to its serous covering be expressed in nomenclature analogous to that used in speaking of the intestine. Briefly, the testicle is normally fixed at the posterior part of the vaginal tunic by the reflexion of the visceral serosa from the sides of the epididymis to form the parietal layer. This arrangement corresponds to the relation of the peritoneum to the ascending colon, where there exists normally no mesocolon. Following this nomenclature we would describe the testicle as having normally no mesorchium. Should, however, the gland not only project into, but hang loose in, the cavity of the tunica vaginalis, being attached to the posterior wall of the tunica by a membrane composed of two layers of serosa and so resembling the mesentery of the small intestine, then we should be correct in terming such an attachment the "mesorchium." In my case the mesorchium, instead of extending almost the whole length of the epididymis, is represented by a small pedicle-like structure and the gland, therefore, is not only abnormally mobile but actually hangs free in the tunical sac. As contributing to abnormal mobility two other factors must be mentioned, both of them being present in this case. They are (1) absence of the middle band of the gubernaculum and (2) capacious tunical sac. The determining cause may be trauma or movements of the lower limbs or muscular effort. There was here no history of trauma and I think that we may assume that sudden contraction of the cremaster might, acting as it would on an abnormally mobile testicle, initiate the torsion.

Symptomatology.—This case is instructive as illustrating the absence of symptoms which would help to a correct diagnosis. As mentioned already, the case was looked on as one of acute orchitis. It would perhaps be more correct to speak of the superficial appearances as those of "periorchitis." I would draw attention to this point, as it has been mentioned by others as one of the conditions attending torsion of the spermatic cord. I would in this connexion also mention that there was apparently no collection of fluid in the tunical sac. This fact I observed carefully; the blood and serous exudation were wiped away after each successive cut in the scrotal tissue and when the tunica was opened there was no sudden escape of fluid. This absence of exudation in the tunical sac is all the more striking when one recollects its almost constant presence in inflammatory affections of the testicle.

The absence of constitutional disturbance calls for comment. In Scudder's paper[17] such disturbance is mentioned as being usual; following on the severe sudden pain in the testicle there are nausea, vomiting, slight elevation of temperature, moderate degree of shock, and chill. It is all the more surprising that none of these should have been evident when every surgeon is familiar with the effect on the patient of handling the spermatic cord. Of course, they may have been present at the commencement of the torsion, but the mother distinctly averred that the child had never been ailing. In connexion with symptoms I would notice the age of the patient—seven months. This is very early so far as these cases go. The condition occurs most frequently in young adolescents, but in Taylor's case (vide supra) the patient was only four hours old.

Treatment.—So far as records show castration is the only treatment for this condition. Torsion is followed by sloughing or by atrophy in nearly all cases, even when the twist has been undone. If done early enough reposition of the displaced organ may have a happy result, as in Nash's case,[18] where manipulation four and three-quarter hours after the onset was successful. Lexer's case also had had repeated attacks of torsion before the organ was finally removed. On the other hand, we have in veterinary practice the intentional production of sterility by torsion of the cord as a substitute for gelding. The efficacy of this practice has been borne out by experiment (Enderlen).[19]

In conclusion, the following points in this case are worthy of note: (1) extreme youth; (2) testicle fully descended; (3) no history of injury; (4) absence of constitutional signs; (5) local signs not diagnostic; and (6) presence of "reversion" with pedunculated mesorchium.

Glasgow.

[16] Taylor: Brit. Med. Jour., 1897, vol. i., p. 458.
[17] Loc. cit.
[18] Loc. cit.
[19] Enderlen: Deutsche Zeitschrift für Chirurgie, 1896, Band 43, Heft 1 and 2. Reported in Jahresbericht für Chirurgie (II. Jahrgang, 1896, S. 980)

ON THE PROPHYLACTIC USE OF MORPHINE IN CASES OF SEVERE CEREBRAL INJURY.

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THERE must be few men, leastwise Edinburgh men, whose student days lay in the early "sixties" who do not recall the suspicion which attached to the use of opium in cases of injuries of the head. Many of the best of surgeons would not venture to use it and the reason was not difficult to understand, for inasmuch as its proximate action was to produce a condition of torpor akin in its features to those which were the dreaded sequelæ of such traumatisms, it was natural to argue that its employment might predispose the sufferer to their advent. Mr. Spence, my revered master, who was for long as great an authority on head injuries north of the Tweed as his distinguished contemporary, Sir Prescott Hewett, on the south, was, on the whole, averse to its employment, and although when the acute symptoms of meningitis or arachnitis made their appearance and restlessness and delirium seized the patient he found through it a medium of soothing him I do not think that he ever regarded its use as a probably curative measure. And his teaching on this point, as on hosts of others pertaining to practical surgery, abode with me, and for many years, unless compelled by the appearance of grievous after-results, I eschewed the use of opium in cerebral injuries, and although its employment when demanded carried with it comfort and quiet to the sufferer, that it played a highly important part in the treatment of the case was with me an uncertainty.

It was not until 1899, when an abstract of a valuable paper[1] by Dr. J. Barr of Liverpool on Meningitis came under my notice, that I realised how freely morphine might be given in this disease, how excellent were the results attendant upon its employment, and how in all probability its beneficent action was brought about largely through its effects upon the vascular and nervous systems, inducing that condition of *rest* which, as Mr. Hilton so admirably taught, is nature's opportunity. Further and natural reasoning was this: if opium by its action on the nervous system quiets brain cells and lessens the functional activity of the nervous fibrils which connect them with one another, if it lessens pain and removes the effects of peripheral stimuli, if it contracts cerebral arterioles and through the cardiac ganglia renders the heart's action slower and vascular pressure less pronounced, then its effects upon a brain that is traumatically damaged and that demands quiet for its repair can only be beneficial. And so I have found it, for if after severe brain injury the patient is kept gently under the influence of morphine convalescence has been more rapid and more steady, grave cerebral symptoms have been wanting, and the continuous rise in temperature which usually marks cerebral laceration and hæmorrhage has been notably absent. It may be argued, however, that in the antiseptic management of the wound lay the whole secret of success, but this is hardly so, for in common with others I have seen these characteristic and continuous rises in temperature where there was no external wound and where the element of sepsis was, so far as ordinary judgment could carry one, entirely absent. Be this as it may, a short record of the following cases will mayhap tend to strengthen my contention.

CASE 1.—Four years ago, in association with my friend Sir Henry Blanc, I was desired by Dr. Dicterlen to see with him a patient who the previous afternoon had attempted suicide by a pistol-shot wound of the head. We met

[1] Brit. Med. Jour., Nov. 18th, 1899

about midday, nearly 24 hours after the infliction of the injury, and found the patient in a somnolent condition from which, however, she was aroused by an examination of the ear. The pistol had been introduced with an upward bearing into the right external meatus, the walls of which were extensively lacerated but did not show much powder marking. The little finger could be readily introduced into the meatus and a gaping fissure of its roof recognised. Neither with the finger nor by gentle use of a probe could the ball be detected and inasmuch as the condition of the patient as regarded consciousness was becoming steadily worse and the signs of intracranial pressure, as evidenced by the slow, labouring pulse, by the dilated and sluggish state of the pupils (most marked on the injured side), by the embarrassed respiration, by muscular twitchings on the left side, and by an elevation of temperature (102° F.), all pointed to the probable presence of an increasing hæmorrhagic effusion, the skull was at once trephined. On the removal of a full-sized button of bone half an inch above and in the line of the external auditory meatus a blood-clot was found and easily removed, its removal showing a linear rent in the dura mater from which there at once began to flow a pus-like fluid which was undoubtedly liquefied brain tissue. Quite half an ounce of this escaped and then, pushed forward by the cerebral pulsations, there appeared greatly lacerated brain matter, a further portion of which was removed by the gentle use of sponges, and the finger now introduced revealed the petrosa widely fissured in the greater part of its extent, but it gave no evidence as to the situation of the ball. The area of the injury was swabbed with a bichloride solution (1 in 2000), a drainage-tube was introduced, and the flap laid down. The improvement in the general condition was at once marked. The pulse rose to its normal rate, the breathing became free, and on awaking from the anæsthetic the patient was fully conscious. Recognising as we all did the extreme gravity of the injury and the part which rest might play in its recovery morphine was ordered hypodermically in one-sixth of a grain dose every six or eight hours, a large external dressing was applied, and the routine followed which experience has proved as the best in the management of such cases. On the day following the operation all was well; after a quiet night consciousness was perfect, the pulse was normal, and the temperature was under 100°. There was, however, evidence of some facial paralysis which at the end of the third day was complete. The drainage-tube was withdrawn in 48 hours and it was interesting to note that softened brain tissue immediately followed its withdrawal and led to the formation of a small hernia cerebri which withered as the tissues beneath which it passed underwent cicatrisation. The record of recovery was uneventful; the temperature never rose above 99° after the third day, all went favourably with the wound, and at the end of six weeks some blue marking on the gauze plugging the ear led to the detection of the ball which was subsequently easily removed in two pieces. It formed a flattened irregular mass and had presumably been lodged in the fissured petrous bone, from which my finger passing over it from within had without detecting it dislodged it. The patient is now in perfect health; the facial paralysis has entirely disappeared and her only complaint is that the absolute deafness upon her right side prevents her enjoying so fully as was her wont music, of which she is fond.

CASE 2.—While the patient whose case has been detailed was convalescing from her injury I was asked by Dr. A. W. Gilchrist of Nice to see with him and Dr. Schmidt a young woman who on the afternoon previous had shot herself in the head. On examining her I found that about one and a half inches below the hair-line in the right frontal region a bullet wound existed which when carefully examined afforded evidence of bone fragments mixed with brain matter. The condition of the patient was good, there were no evidences of compression or paralysis, the symptoms of early shock which had been pronounced had passed away, and some existing rise in temperature (101° F.) probably indicated the reaction from it. She was at once trephined with a large-sized instrument, the wound marking the centre of the circle, and the opening was afterwards enlarged by Hoffmann's forceps. The entire upper third of the right frontal convolution was destroyed, for it was pulped, and in this lay, with portions of the bullet, many small fragments of the inner table. When these and the broken-down tissue had been removed the bullet track was recognisable and along this, propelled largely by its own weight, a gunshot probe passed easily backward until it was arrested by the membranes covering the supra-parietal lobe. It gave no evidence, however, of the position of the ball and I concluded that this, diverted by the resistance it met with, had passed at a tangent somewhere towards the base, possibly to rest on the tentorium cerebelli. Further search was therefore abandoned, the area of damaged brain was sponged over with a 1 in 2000 bichloride solution, all bone fragments and broken-down cerebral matter were removed, and a drainage-tube traversing the existing cavity was carried for a short distance into the bullet track and brought outside through the wound of entrance, the bruised sides of which had been cut away. Morphine in one-sixth of a grain doses hypodermically was prescribed every six or eight hours with a daily change of dressing, while the drainage-tube was to be withdrawn at the end of 48 hours. Improvement was steady and continuous; in two days after operation the temperature was normal and it never rose again and at the end of a month, with a soundly healed wound, the patient was well. At no time were any mental symptoms or emotional changes observed and the notable evidences of her high culture and education remained unimpaired. We had hoped for an examination by the x rays but this was denied us and the patient within two months of the operation passed from observation, but happily I have just had news of her (December, 1903) that she is in perfect health, is married, and has suffered no harm from the presence of the bullet.[2]

CASE 3.—The patient, a coachman, aged 28 years, was in a carriage accident thrown violently from a considerable height and pitched upon the pavement. He was picked up insensible and bleeding profusely from the left ear. Seen by Dr. W. Gordon Sanders and admitted a few hours later under my care at the British Hospital at Cannes, he was found to be more or less confused. His pulse was slow and laboured (48), his temperature was subnormal, (96° F.), and on the left side of the vertex, a little outside the sagittal suture, there was a lacerated wound of the scalp. There were no evidences of paralysis or of compression and the notable feature in his condition was the severity of the hæmorrhage from the left auricle. It was more or less staunched by the washing out of the ear with a hot antiseptic lotion and the curtaining of the meatus with iodoform gauze, but it was severe enough to soak quickly through a heavy dressing and to deluge his pillow. Hæmatemesis was also present, due to blood finding its way from the nasopharynx into the stomach. A good dose of calomel was prescribed, cold was applied to the head, warmth to the feet, and bromide of potassium was given. On the day following he was better, his pulse had quickened somewhat, his temperature was rising (100°), the bleeding from the ear had much decreased, and there had been no return of the vomiting of blood. He was, however, very irritable and restless and had marked delusions as to his surroundings. During the succeeding night he was with difficulty kept in bed owing to the delusions and when there lay in a state of general flexion and was sulky and rude when addressed. The temperature was 100·4° and the pulse had again fallen to nearly 40 and was full and labouring in character. After a very free action of the bowels this improved both in rate and quality, so that venesection (which I had contemplated) was postponed and one-sixth of a grain of morphine was given hypodermically. This was repeated at intervals, its effect being watched. Its action was most satisfactory, for he became quiet and amenable, his temperature fell slowly to normal, and his pulse rose steadily. The discharge from the ear lessened and although it continued for a time its amount created no anxiety. The morphine was given every eight hours for a fortnight, during which time he made steady progress, all physical signs of cerebral irritation passing away and with them the abnormal mental condition which succeeded his injury. He was discharged at the end of six weeks, when his only complaint was of occasional giddy attacks. He has since remained well and is now performing the duties of a responsible situation.

It may be thought by many, and maybe with good reason, that the use of morphine had little to do with the smooth recovery of these cases and that recent experiences in South Africa have taught how unexpectedly large is the percentage

[2] Both women shot themselves with a 0·32 calibre pistol carrying an 80-grain hollow-based bullet propelled by a nitro powder. The comparatively slight skin marking that the use of such a powder may produce is remarkable.

of recoveries in gunshot injuries of the brain. But the conditions are not quite on a par for we must take into consideration the velocity and the penetrating power of the rifle bullet in contrast with the feebler force and the at times almost explosive effects which follow the close use of the pistol. The general prognosis in pistol-shot wounds of the brain is bad; indeed, one authority holds that they are "worse probably than in any other class of bodily injury," and although in my own experience, which is a fair one in this class of traumatism, I have seen some recoveries the majority of the issues have been unfavourable. Of one thing in connexion with their management I am confident and that is in the wisdom of the immediate use of the trephine. The manner in which the inner table of the skull suffers is most notable, the condition of the external plate is no guide as to the amount of comminution and destruction which may underlie it, and as bone fragments are most active agents in septic infection it is imperative that they should be removed. Moreover, opportunity is afforded for the clearing away of pulped and irreparably damaged brain tissue and of rendering the field of injury aseptic. The danger directly attaching to the mere operation carried out with antiseptic precautions is so small (Wagner puts it at 1·23 per cent.) that it is hardly in the reckoning, and if, as so often happens in suicidal attempts, it is the frontal or parietal region that suffers one must remember that in the event of recovery epilepsy is more likely to follow cerebral damage in such areas and that the primary employment of the trephine is likely to be attended by future benefit. To the action of the morphine I am inclined to ascribe the rapid and steady fall in temperature in the cases recorded and that during convalescence it maintained a normal level. Marked early rise with a tendency to increase is significant of severe cerebral laceration, and as in at least two of the cases this was indisputable its absence was not only of good augury but was possibly the direct result of the treatment. In all the cases morphine was given for at least a fortnight; in one, the first, it was administered for three weeks, because it is during that period of time in which congestive and inflammatory evils declare themselves.

Apart from the management of these patients there are one or two points of interest in their stories. The first has a medico-legal bearing, for the patient told me that in the expectation of immediate death following upon the explosion of the pistol she, lying recumbent, placed the muzzle inside the ear. Instead of death the discharge was followed by the most intense agony in the ear and head, so great as to compel her to rise instantly and to seek her home fully a quarter of a mile distant. *En route* she threw the pistol away. It is difficult to believe that with such shock as her brain must have sustained—shock which positively liquefied cerebral matter—she should not, temporarily at least, have become unconscious, but her statement was emphatic that she had no loss of consciousness and that her immediate agony was wellnigh unendurable. The situation of the injury in Case 2 and its sequel add interest to the observation already recorded by an eminent American surgeon that "in 11 cases in which frontal laceration was confined to the left frontal lobe there was mental obscuration or deficiency, apart from mere stupor or delirium, in every one, while in seven in which laceration was confined to the right lobe it was observed in none." I am inclined to think that Case 3 possibly lends further support to this statement, for the injury was on the left side; the blow received was high up and far back in the parietal region, and it is not impossible that the very notable mental symptoms displayed by the patient were due to some damage by "contre-coup" to the anterior portion of the left frontal lobe.

Cannes, France.

THE BAZAAR IN AID OF THE VICTORIA HOSPITAL FOR CHILDREN.—On June 21st Her Majesty the Queen opened a bazaar at the Albert Hall in aid of the Victoria Hospital for Children, Chelsea. Many of the stalls represented, and were named after, nursery rhymes or fairy stories, and among those who presided over them were Princess Louise (Duchess of Argyll), Princess Louise Augusta of Schleswig-Holstein, Lady Cadogan, Mrs. Leopold de Rothschild (with the assistance of Lady Crewe, Lady Essex, and Lady Wolverton), and Lady Broadbent. The bazaar was opened on the following day by Princess Louise and closed its doors on June 23rd. It is hoped that the financial result of this bazaar will add to the treasury of the Victoria Hospital a very substantial sum of money.

NOTES ON THREE CASES OF INTESTINAL OBSTRUCTION.

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THE subject of intestinal obstruction may be trite and commonplace but it can never fail to interest and from almost any case there is something fresh to be learnt. The cases I am about to record are, I think, more than usually interesting. They are certainly instructive as they illustrate the necessity of caution before expressing an opinion on the conditions leading to obstruction. In the first case I had to deal with an unsuspected obturator hernia in an elderly woman. In the second the small intestines were so matted together that obstruction, which had been incomplete for some time, became suddenly complete and for this condition lateral anastomosis had to be performed. The last case was one of chronic obstruction due to inflammatory exudation in the pelvis, necessitating a temporary colotomy for its relief.

The protrusion of a loop or the portion of a loop of bowel through the obturator foramen (constituting what is known as an obturator hernia) is not a common cause of acute intestinal obstruction. It was first noticed in the early part of the eighteenth century, since when about 93 cases have been recorded. It generally occurs in persons above the age of 50 years and mostly in females. In the event of strangulation taking place symptoms have in some cases strikingly resembled those of strangulated femoral hernia, but two points remain to distinguish it—viz., fulness of the thigh in the region of Scarpa's triangle and the radiating pain due to pressure on the obturator nerve. Marked as this pain may be, yet I believe I am correct in saying that it is most difficult to read aright, for it failed in a case reported by Mr. A. A. Bowlby to give an inkling of the condition present. In other cases—and the majority—the symptoms are those of acute obstruction for which laparotomy has been performed, not marked by any great success. The following case exemplifies very well the difficulties of diagnosis and I may say the question of treatment also.

CASE 1.—The patient, a married female, aged 75 years, a thin, spare person, who spent most of her life upon a couch and chair in the same room, was suddenly taken on the evening of Nov. 18th, 1899, with pain in the left leg which she thought was paralysed. During that night she vomited once or twice. I saw her for the first time on the 19th at midday. Complaint was made to me of great abdominal pain and that she had vomited blood. I should mention that she was very deaf and that I had the greatest difficulty in getting any information from her beyond the fact "that it was one of her old attacks." It seems that she was in the habit of having attacks of abdominal pain and sickness. On examination the tongue was furred but moist and the pulse was full and soft, about 100 per minute. Careful palpation of the abdomen revealed nothing. On examining the femoral regions I thought that I felt a little fulness in the left crural canal but could not be certain of it. The pain in her left thigh, I candidly confess, conveyed no meaning to me at this point of the case. Knowing my patient to be one who complained very easily, and having seen no evidence of vomited blood (indeed, she had not vomited for several hours), I concluded the conditions pointed to some stomachic disturbance. I prescribed a simple mixture of bismuth and soda, ordered an enema to be given, and left word that I was to be informed if the vomiting came on again. Late the same evening a message came that she had been sick twice (only slightly) and that the enema had acted. I saw her early on the next morning. She was decidedly worse. During the night the vomiting had again come on; it was now dark brown in colour and very evil smelling. The fulness in the groin seemed to me more evident and the pain in the left thigh (of which she now complained bitterly) I took to be caused by a tightly wedged partial enterocele in the femoral canal. She was removed to the infirmary and I operated at 5.30 P.M. It got to be so late because she at first refused operation. I made a long incision about a finger's breadth internal to the vessels and carefully explored the crural canal, but there was no hernia and the small lump I had felt turned out to be an enlarged gland. It was at this point that the possibility of there being an obturator hernia

occurred to me. I was preparing to do a laparotomy, but her condition, never good, became so alarming that I reluctantly closed the femoral wound and put her back to bed unrelieved of her symptoms of obstruction. Naturally I was very disappointed at my failure and set about to find an explanation. With the idea of an obturator hernia fixed in my mind the pain in her thigh assumed new importance. I felt she would never stand a laparotomy and I determined to return to the infirmary, reopen the wound, and to seek for the hernia, if there, beneath the pectineus. Unfortunately I was detained till 11.30 P.M. On my arrival I found my patient in a most critical condition, constantly vomiting the most offensive matter, and apparently sinking rapidly. If anything was to be done to save her it had to be done quickly. So without removing her to the theatre, and after a very little chloroform had been administered, I hastily reopened the wound and then with the handle of a scalpel I broke through the fibres of the subjacent muscle, and at the depth of about two inches I came upon a glistening white membrane which I believed was the fascia covering the obturator externus. This I divided, for it distinctly bulged into the wound; when beneath it I found a hernia. The sac was thin and very transparent; this, again, I simply broke asunder with forceps and a loop of bowel was exposed, fully of the size of a bantam's egg. The bowel was only moderately congested, the surface had not lost its lustre, and I was able after a little manipulation to pull it down; and having satisfied myself of its condition I reduced it without the necessity of relieving any obstructing band and passed my finger freely through the obturator foramen. Her state was now bad in the extreme, so I made no attempt to do more than to secure the sac. There was little or no hæmorrhage from the wound; it was only lightly drawn together with silkworm sutures and dressings were applied. Oxygen was freely given, as were also strychnine and atropine subcutaneously, with saline injections. Under this treatment she slowly revived. At about 4 A.M. reactionary bleeding took place; the house surgeon packed the wound with iodoform gauze and this soon arrested the bleeding. The subsequent progress was uneventful. She made a rapid and complete recovery and left the infirmary at the end of a month.

Reviewing the case in the light of subsequent knowledge I very much regret that I did not complete my first operation, as I ought to have done, by separating the pectineus from the adductor longus, by this means saving many valuable hours. In defence I may say that I had never seen such a case and that I was undecided whether, if the hernia did exist it could be possible to reduce it by an open incision. At that time I felt that an abdominal section held out the best chance; and if I had diagnosed an obturator hernia before the first operation I should have attempted to reduce it by such means.

CASE 2.—The patient, a married woman, aged 61 years, was admitted into the Southport Infirmary on July 29th, 1903, complaining of incessant vomiting and abdominal pain. Her present illness commenced abruptly five days before with pain and sickness. She was attended by her own medical man and the symptoms abated somewhat, but on the morning of her admission the vomit became distinctly fæcal in character. On admission she was found to be a pallid but well-nourished woman, looking more than her age and complaining of vague abdominal pain and sickness. The vomit was copious and fæcal in odour. The tongue was furred and dry. The pulse was 84 and of good strength and volume. The abdomen was only moderately distended, not particularly tender to palpation, except over the right iliac region. The outline of the abdomen was somewhat irregular, giving the impression of an ill defined swelling in the lower right half, but nothing could be made out by palpation. There was no obvious hernia. The temperature was 98·8° F. The following history was obtained. 30 years previously she had puerperal fever. Seven years ago she became ruptured on the right side and within two years there was a large and painful swelling. She never wore a truss and at times the swelling disappeared, as in point of fact it had done for three days prior to this illness. She had never suffered from constipation. Her health had always been indifferent. In spite of the vagueness of her general symptoms the presence of fæcal vomiting could not be overlooked, so immediate operation was decided upon. On opening the peritoneum a mass of intestines deeply congested and intimately matted toge her by web like adhesions bulged into the wound. Carefully covered by hot sterilised gauze they were easily delivered from the abdominal cavity. On doing this there appeared beneath them the remainder of the small intestines so collapsed and shrunken as to look more like the empty bowels of an infant. Before proceeding further I made a systematic examination of all possible hernial pouches with a negative result. A more detailed examination of the matted bowels revealed the following state of affairs. One portion of the coils ended in a pouch from the under side of which proceeded quite abruptly the collapsed bowel. There was no acute kink but from my examination I concluded that at this point the intestine had taken a sigmoid curve, for I could trace the outline of the collapsed bowel for some inches on the distended portion. Here the adhesions were very dense and any attempt to unravel them would only have led to disaster. I therefore did a lateral anastomosis between the pouch and the most convenient part of the collapsed bowel.

As may be imagined, it was no easy matter to effect nice coaptation between a very distended and a very shrunken bowel. A bone bobbin was used with a simple suture of fine silk in two layers. Directly the restraining clamps were removed flatus and fluid passed from the distended portion. I then attempted to release some of the other adhesions but found that an impossible task. To insure more rapid clearing of the congested bowel I tapped the loaded portion well away from my junction, removing a good quantity of liquid fæces. This small aperture was closed by a purse-string suture. The abdominal wound was closed in the usual way. The patient stood the rather prolonged operation very well and made a steady and uneventful recovery. The bowels were opened naturally the next day. She is now (June, 1904) enjoying the best of health and the hernia has never come down since the operation.

One or two interesting points arise out of a consideration of this case. What gave rise to such extensive and yet local matting of the bowels? Was it the long antecedent puerperal peritonitis or the more likely adhesions in a big femoral hernia? I think this is the most probable explanation but that does not lessen the interest because she must evidently have been able to reduce it freely, and yet the coils were so matted and bulky that the mass appeared to be of quite the size of a child's head. Then, again, there was the unusual form the matting had assumed, allowing the slow passage through a constantly narrowing channel of the fluid contents of the bowel which led to a sudden blocking when some particle larger than usual lodged in this tortuous canal. The age of the patient and her rapid recovery are points not without interest.

CASE 3.—The patient, a female, aged 27 years, was admitted under my care into the Southport Infirmary on April 14th, 1900, suffering from sickness and great abdominal pain which was increased on the slightest attempt at defecation. She stated that she had suffered from ulceration of the stomach 18 months previously and that since then her health had been indifferent. There was no definite history of any other illness to be obtained. Nine weeks before admission she contracted a cold and the menstrual period stopped suddenly. A week after this she was taken during the night with severe abdominal pain and vomiting. I saw her in the morning and found great tenderness over the cæcum with a rapid pulse and elevated temperature. It seemed as if I had to deal with a case of appendicular catarrh and I treated her accordingly. From these acute symptoms she slowly recovered, but the abdominal tenderness continued, with irregular temperatures and increasing constipation, the relief of which, always obtained by enemata or castor oil, was accompanied by agonising pain. In these circumstances a vaginal examination was made and I then found the uterus and adnexa fixed in a mass of inflammatory exudation. I therefore recommended her removal to the infirmary for further treatment and observation. On admission an examination was made under chloroform which revealed the following state of affairs. The uterus was absolutely fixed and pushed to the left. The sound took a lateral direction and passed half an inch further than normal. There was doming of the fornices and a large mass occupied the right broad ligament. It was not moveable and gave no sense of fluctuation. Per rectum a collar of exudation surrounded the bowel, considerably reducing its lumen. A diagnosis of pelvic cellulitis was made and I considered it probable that an abscess was in course of formation. For a few days after her admission the temperature remained normal and she was treated on general principles. But from the onset of the next

menstrual period (April 19th) the temperature was always above normal and she got gradually but surely worse, the most noticeable feature being the increasing difficulty in getting relief of the bowels. By the 30th the pelvic swelling could be felt above the pubes. On May 4th ether was administered and an exploratory puncture was made into Douglas's pouch but I was unfortunate not to be able to obtain the pus I expected. Thereupon I proceeded to open the abdomen in the middle line and found that the pelvis was filled with coils of small intestines inextricably matted together and the large bowel was also filled with fæces. Beneath these could be felt an irregular swelling filling the pelvic cavity. Any attempt to reach the abscess (and I was sure there was one) by this means seemed to be likewise impossible. In these circumstances I determined to do a colotomy and thereby relieve the most urgent condition. The descending colon was fixed to the abdominal wound in the usual way. By May 16th pus escaped from the rectum and on June 7th an incision was made into the posterior fornix (which by this time was soft, bulging, and fluctuating and no longer of a stony hardness) and a large quantity of pus was evacuated; also a communication was readily effected between that cavity and the rectum. However, any attempt to syringe lotion from the colotomy opening out by the rectum, or *vice versâ*, proved hopeless. This complete obstruction remained for three months. On June 20th Mr. A. W. Mayo Robson, who was visiting Southport, kindly consented to see the patient with me. He shared my view of the case that it was a pyosalpinx which had burst into the left broad ligament, producing by a solid collar of exudation a pseudo-stricture of the rectum. Mr. Robson considered that I had taken the best and, indeed, the only, course available in the treatment I had pursued. But few words are necessary to describe the further progress. Gradually the abscess cavity closed up and more slowly the pelvic exudation became absorbed. By the end of September the lumen of the occluded bowel seemed to be restored so far, judging by digital examination and syringing through, that I decided to attempt closure of the colotomy wound.

On starting to operate on Sept. 29th I had determined to close the bowel by the extraperitoneal method generally recommended but on the first incision I found the attachment between the bowel and the abdominal wall to be so tenuous that I immediately opened the peritoneal cavity. Faced with this difficulty, I separated the bowel all round from the abdominal walls, clamped it above and below, and proceeded to unite the two ends by transverse suturing in two layers over a large bone bobbin. Great care was used to protect the general peritoneal cavity from soiling. I may mention that very few traces remained of the former severe condition. The united intestine was dropped back and the wound was closed in the usual way. Nothing further remains to be said except that she made an excellent recovery and I heard from her early this year that she was in the best of health and not suffering from constipation. Finally, I may mention that the method of restoring the bowel I was compelled to adopt has the merit of novelty, I believe, and its success would lead me to follow the same course in similar circumstances.

Southport.

A CASE OF PERFORATED GASTRIC ULCER WITH APPENDICITIS; OPERATION; RECOVERY.

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Mr. W. Watson Cheyne's and Dr. H Wilbe's case of perforated gastric ulcer with diseased appendix recorded in THE LANCET of June 11th, p. 1641, has suggested to me the publication of a very similar case that has lately been under my care.

A female, aged 17 years, described as a "dyer's hand," was admitted into St. Mary's Hospital on the early morning of April 14th of this year in a condition of collapse and obviously suffering from general peritonitis. The only history obtainable at the time was that on the evening of the 9th she felt sick and had pain which was referred vaguely to the right side of the abdomen. She remained indoors on the 10th (Sunday) when she stated that her pain was definitely in the right iliac region, indicating that area with her finger. On the 11th, 12th, and 13th she went to her work as usual but on each day complained of pain which she located in her epigastrium. On the 13th, about 5 P.M., she was seized with an attack of vomiting and acute pain in the lower abdomen, worse on the right side, which necessitated her removal home in a cab. The pain doubled her up and caused her to shriek. Her condition became worse and at 9 P.M. Dr. R. W. Clark of Brondesbury was sent for and he ordered her removal to the hospital where she arrived in the early hours of the 14th. On admission she was found to be in a condition of serious collapse. Her temperature was 96° F., the pulse was 120, feeble and irregular, and the respirations were 32 and shallow in character. Her features were drawn and the surface was pale, cold, and clammy. The abdomen was generally distended and tender; the abdominal walls were rigid and did not move on respiration. Pain was referred chiefly to the lower abdomen and more to the right than to the left side. The percussion note was dull in either flank, while rectal examination merely demonstrated extreme tenderness. It was certain that she had general peritonitis, and having regard to the fact that the pain had been located in the right iliac fossa I considered that the probable cause was appendicitis. The operation was, however, postponed till 7 A.M. owing to the marked degree of collapse present which may have been somewhat accentuated by her recent journey to the hospital. The wisdom of this was obvious when with merely the application of warmth and stimulants in two or three hours' time her colour returned, the temperature rose to 100°, and her pulse improved in volume and regularity. The abdomen was opened by an incision over the appendix region, giving exit to a quantity of non-odorous purulent fluid containing flakes of lymph. The coils of small intestine were seen to be intensely congested and lightly glued together by sticky lymph. The appendix was found to be four inches in length, rigid with thickened walls, while its lumen contained two concretions. Its peritoneal coat was intensely injected in common with the rest of the peritoneum. It was removed in the usual manner, but though obviously in a condition of acute inflammation there was no perforation or area of necrosis and it was not therefore considered to be the cause of the general peritoneal infection present. The two ovaries and tubes were examined and found to be intensely congested as part of the general peritonitis of which they did not appear to be the origin.

A median incision was then made above the umbilicus and it was at once seen that the peritonitis above the line of the transverse colon was of older date, judging by the amount of lymph and adhesions, than the inflammation in the lower part of the sac. After some difficulty a perforation was found in the middle of an indurated area of the size of a five-shilling piece, situated beneath the left lobe of the liver on the anterior aspect of the small curvature of the stomach and close to the cardiac end. This was invaginated and the edges were brought together by two layers of fine silk sutures. The abdomen was then carefully flushed out with hot saline solution and sponged nearly dry by means of marine sponges on holders. A Keith's drainage-tube was inserted through a small median incision above the pubes into the pelvis and a rubber tube surrounded by some loose gauze packing was passed between the stomach and the liver down to the site of the perforation. The wound in the appendix region was entirely closed. There was a certain amount of vomiting for a few hours after the operation, but at 4 P.M. the patient felt better, her colour had returned, and there was no pain. The pulse was 120, the respirations were 32, and the temperature was 99·4°. She was allowed a little hot water by the mouth but otherwise the feeding was entirely by the bowel.

The progress of the case was favourable till the evening of the 15th, when the vomiting, which had hitherto only occurred at long intervals and then only to a slight degree, became more frequent, the patient bringing up bile-stained fluid, her face again began to appear drawn, and the pulse-rate increased from 100 to 112. On the 16th, as these signs and symptoms had somewhat increased, an anæsthetic was given with a view to again washing out the peritoneal cavity; on removing the gauze packing and changing the drainage-tubes it was found, however, that the peritoneum was less congested, that very little lymph or fluid was present, and that the peritonitis had practically subsided.

The two wounds were accordingly redrained, but no gauze was used in the upper wound as had been done in the first instance. The patient vomited two or three times after the anæsthetic but slept for some hours after a dose of morphine. On the 18th she appeared very much brighter, said she felt better, and had no sickness; her pulse rate in the evening was 92. It was now evident that the presence of the gauze packing around the upper drainage-tube had been the cause of the vomiting on the 15th and 16th. From this point the patient's progress towards recovery was practically uninterrupted. The Keith's tube was omitted on the 20th but the rubber tube in the upper wound was retained for a week longer. She left the hospital convalescent on May 19th.

The chief points of interest in this case are the question of diagnosis and the coincidence of an ordinary attack of appendicitis with a gastric ulcer which perforated at that particular time. The girl, both to Dr. Clark and to us at the hospital, laid most stress on the pain in the lower abdomen, which, as stated above, was most marked on the right side and which was first felt on April 9th and 10th. After the operation, however, and on carefully questioning both the patient and her mother it was ascertained that she had suffered from "indigestion" for a year, pain usually coming on half an hour after food and being situated in the epigastric region and between the shoulders. She had never had any hæmatemesis or even vomiting.

With regard to the appendicitis there could be no doubt from the appearance of the appendix that that condition was present. The appendix was rigid with thickening of the submucous and muscular coats, the mucous membrane showed two or three patches of extravasated blood, while the lumen contained two concretions, each about half an inch in length. In fact, the whole appearance of the organ was that so often seen in operations on cases of relapsing appendicitis. The intense congestion of the peritoneal coat in this particular instance was no criterion of appendicitis, as it only shared the appearance of the rest of the peritoneum. As, however, there was neither a perforation nor any necrotic patch in the appendix, and as moreover the purulent fluid in the peritoneal cavity was practically odourless, I did not consider that the peritonitis in this case was due to appendicitis and therefore continued my search for another lesion. There was not any free gas in the peritoneal cavity. I think, then, that the case may fairly be considered a case of appendicitis supervening on a gastric ulcer with perforation of the latter, and it would be an interesting speculation as to how far the appendicitis may not have precipitated the last event.

Another point also illustrated by this case is the advantage occasionally gained in these cases of acute abdominal lesions of waiting for an hour or two before operation until the initial shock has passed off. Had this girl been operated upon within the first hour of her admission to hospital I feel confident that no very prolonged operation would have been possible, whereas during the manipulations necessary to remove an appendix, search for and sew up a gastric ulcer, and thoroughly flush out and provide adequate drainage for the peritoneal cavity there was never the slightest anxiety on the part of the anæsthetist as to her general condition. This is more or less automatically provided for in private work where a certain amount of time for preparation is always required before an operation is even possible, but in hospital work where an operation can always be performed within half an hour or so of the patient's admission it is occasionally lost sight of.

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THE ENUMERATION OF LEUCOCYTES.

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THE object of this paper is to draw attention to a few questions of technique with a view to increase the value of leucocytic examinations.

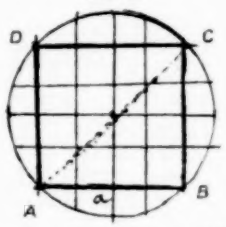
A.—THE TOTAL COUNT.

At present there are two familiar methods in use for this determination, both of which consist essentially in counting the number of leucocytes present in a cubic space of known dimensions. The ratio this space bears to a cubic millimetre being known it is easy to state the number of leucocytes present in a cubic millimetre, which is thus taken as the standard of capacity. In both cases the cubic space is obtained by placing a drop of blood diluted to a known degree into a chamber formed by the apposition of a cover-slip and a specially hollowed slide. The depth of the cubic space is a known measurement which varies with the kind of slide employed. It is, for instance, one-fifth of a millimetre in Gowers's hæmocytometer and one-tenth of a millimetre in a Zappert chamber, as also in the Abbé Zeiss slide supplied in the Thoma-Zeiss hæmocytometer. As this last is the slide most commonly used I shall in future refer only to it. The depth of the space being a constant factor when a given slide is used, the above-mentioned two methods refer to the ways of determining the area of the surface of the space.

The older method, which is very inefficient on account of its tediousness, consisted in using for this purpose the square inclosed by the ruled lines of the Abbé Zeiss slide, and is hence known as the square method. The side of each square is $\frac{1}{20}$th of a millimetre, so that the cubic capacity of the space it covers is $\frac{1}{20}$th $\times$ $\frac{1}{20}$th $\times$ $\frac{1}{10}$th of a cubic millimetre—i.e., $\frac{1}{4000}$th of a cubic millimetre. It will be readily appreciated that the disadvantage of this method lies in the smallness of its unit. A modification of this method consists in placing a piece of cardboard, from which a square has been cut away, over the eyepiece. The field of view is then a large square which bears a determinable relation to the smaller ruled squares and so to a cubic millimetre. Practical difficulties have, however, caused this method to be superseded by the following one.

The next method was demonstrated by Stengel[1] some ten years ago and has since rapidly gained favour amongst hæmatologists, who frequently re-discover it. One might call it the field method of counting, in contradistinction to the square method, as its essence consists in the use of a larger unit of area—namely, the field of vision of the microscope. Its advantage is that one can more rapidly count a larger number of leucocytes, with a consequent increase in accuracy of results, but it has the disadvantage of entailing a rather involved calculation. The area covered by the circular field is found by multiplying the square of the radius by $\frac{22}{7}$ (the usual formula being πr^2). There are two ways of measuring the radius of the field which, briefly stated, consist in: 1. Moving the Abbé Zeiss slide until one of its ruled lines is the maximum diameter of the field, and observing how many times that the line forms the side of a little square. As each of these little sides measures one-twentieth of a millimetre, the ratio of the radius of the field, which is of course half the diameter, to a millimetre is known at once. 2. Moving the slide and altering the magnification of the microscope until a square formed by the ruled lines, and containing, therefore, several little squares, touches the circumference of the field at the four corners. The radius then is equal to $\frac{a}{\sqrt{2}}$, where a is the length of the side A B of the large square A B C D (by the use of Euclid, Book I., Prop. 47). In practice this takes more time and trouble but yields more accurate results.

FIG. 1.



Radius, or $\frac{1}{2}$ A C, is equal to $\frac{A B}{\sqrt{2}}$.

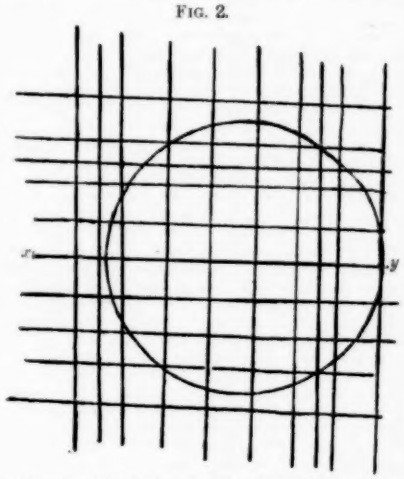
The field method is commonly employed in the following way. Recognising the fact that the diameter, and therefore the area, of the field can be varied at will by adjusting the magnifying powers of the microscope, a diameter is usually taken which contains an integral number—say, six—of sides

1 Stengel: Twentieth Century Practice of Medicine, vol. vii., p. 271.

of the little ruled squares. The cubic capacity of the underlying space is then calculated as above and its relation to the standard, a cubic millimetre, is thus ascertained. This relation is usually a complicated fraction. The leucocytes are then counted in a number of fields, the average number per field is found, and the result is multiplied by the degree of dilution of the blood and divided by the above fraction.

It has occurred to me, however, that this method might be advantageously modified in the following way. If one were to take a field the cubic capacity of which bears a very simple ratio to a cubic millimetre—and this can be easily done by varying the size of the field until its radius is of the required dimensions—all calculation would be thereby avoided. This will be made clearer by taking an illustration and I shall give as an example the conditions which I personally work with. The blood is diluted until it is of the strength of 1 in 20, the microscope is arranged until the cubic capacity of a field is $\frac{1}{25}$th of a cubic millimetre, then all that one has to do is to count the leucocytes in 25 fields and that number, without any further calculation and with merely the addition of two terminal cyphers, is the actual number of leucocytes in a cubic millimetre of blood—i.e., the result desired. It will be found by calculation that this is the case when the diameter of the field contains six and two-fifths[2] sides of the little ruled squares, or when the side of the square taken in the second method above described contains four and a half sides of little squares. It may be objected that it is not so easy to measure such a dimension as it is in the case of an integral number, but in practice the following device removes that difficulty. It will be remembered that on an Abbé-Zeiss slide every fifth square is bisected by a line the function of which is, in conjunction with three similar lines, to inclose sets of 16 little squares. One therefore places one termination of the diameter at the right-hand corner of a clear little square in such a way that the diameter includes the side of that square, the side of a bisected square, and the sides of four clear squares in order. It is then easy to judge two-fifths of the side of the next square when that side is already bisected.

FIG. 2.



x, *y*, a diameter of the field contains 6⅖ sides of the little squares.

In my microscope (a Leitz II.A with Leitz lenses) this is the case if one uses a No. 1 eyepiece with a No. 7 objective and pulls out the draw tube until the mark 170 just shows; but it is obvious that any microscope can be similarly adjusted, no knowledge of its powers being required. However, this preliminary adjustment, until the diameter measures six and two-fifths times the side of a little square, is obviated by the knowledge, gained once and for all for each microscope, that with certain lenses, as exemplified above, the diameter of the field must be what we want. It is also clear that the same method can be employed whatever be the degree of dilution and whatever the number of fields we wish to use. For instance, if one wishes to count 50 consecutive fields one needs a diameter of four and a half times the side of a little square, which in my microscope is obtained by using a No. 3 eyepiece and drawing the tube out to 200. It is better, however, to count 25 fields in two separate drops, as not only does one thus check possible experimental errors but otherwise one only avoids counting the same fields twice by reaching peripheral areas where the thickness of the drop is not even.

I would suggest that Lyon and Thoma's[3] rule relating to the inclusion of erythrocytes in the Abbé-Zeiss squares be adapted to the field method of counting leucocytes thus. Imagine a vertical diameter in the field parallel to the observer's sagittal suture and let all corpuscles seen to the left or western side of that diameter be counted as being within the field, whether they are wholly so or only partly so. On the opposite right or eastern side only the corpuscles which are wholly in the field should be counted, while those touching the circumference should be rejected. This would insure greater accuracy than, for instance, the method employed in the Prague clinic[4] of counting all the corpuscles present in all the 400 squares of the Abbé-Zeiss slide, and if 25 fields are examined in two drops four times as many corpuscles are counted as in that method in considerably less time.

Diluting the blood to the strength of 1 in 20 involves a special pipette which is supplied in the Thoma-Zeiss hæmocytometer under the name of the 1 in 10 (white) pipette. It is, however, preferable to use this than to use the same pipette for red and white corpuscles, for at least four reasons. First, using such a great dilution as 1 in 100 involves the absence of leucocytes from a number of fields and this makes it much more tedious to count a large number, apart from the fallacy always attached to negative results; in other words, in using the field method with such a dilution it is not easy to break oneself of the habit of unconsciously moving the slide until something positive catches the eye. Secondly, the use of such staining reagents as Toison's solution, which are necessary in the double method of counting, means the accumulation of deposit in the pipette, the more rapidly if, as is too frequently the case, it is not cleaned immediately after use. The objection to the use of acetic acid[5] as a diluent—namely, that one confounds the nuclei of leucocytes with the débris of erythrocytes—must surely be a theoretical one; it is hard to understand how any such difficulty could arise after half an hour's practice. Particularly is this so when one bears in mind that Gowers's suggestion of picking out leucocytes by keeping the focus slightly nearer than would be best for the definition of erythrocytes holds true equally for their nuclei after the use of acetic acid, being due in either case to higher refractive power. Thirdly, by using a separate pipette one can vary the dilution according to the number of leucocytes that one expects from either a clinical knowledge of the case or a previous count. In a normal case, under the conditions given above, one finds three or four corpuscles per field, a very convenient number. In cases of leucopenia one can use a 1 in 10 dilution with the Thoma-Zeiss white pipette, multiplying the final result by two. In cases with high leucocytic counts the 1 in 100 (red) pipette may be used with acetic acid as the diluent. Fourthly, separate pipettes tend to deter one from the use of the relative count. It is clear that such statements as "there is one leucocyte to 700 erythrocytes" conveys very little information about leucocytes unless one knows the other varying factor, the number of erythrocytes; even then if the latter number depart at all from the normal the statement is apt to be very misleading until one makes a further troublesome calculation.

An incidental advantage of this modified field method of counting is that one is thereby enabled rapidly to count large numbers of leucocytes. That this is not an unimportant fact will be evident from a consideration of the possible error due solely to paucity of data. Thus, in a normal case, with a dilution of 1 in 20, if one counts the leucocytes in 100[6] little squares the possible error is 40 per cent.; if one counts the leucocytes in 400[7] little squares the possible error is 20 per cent.; if

[2] To be exact, $4\frac{\sqrt{7}}{11}$, or 6·36.

[3] Lyon and Thoma: Virchow's Archiv, Band lxxxiv., p. 131, 1881.

[4] The only method I am aware of besides the one just described involving no calculation.

[5] I use 30 per cent. of the B.P. acidum aceticum dilutum—i.e., 1·4 per cent. of pure hydrogen acetate.

[6] Usual method adopted.

[7] Prague method.

one counts the leucocytes in 25 fields of the above-stated dimensions the possible error is 14 per cent.; if one repeats the count[8] of leucocytes in 25 fields of the above-stated dimensions the possible error is 10 per cent. In other words, a count even under the last of these conditions may be 1000 corpuscles out from the truth; it is unusual, however, that greater accuracy than this is at present of much value clinically. When it is, one has to count 25 fields in each of four drops, the error then being only 3·5 per cent.—i.e., 300 corpuscles.

The ease, rapidity, absence of mental strain, and greater accuracy in results which characterise this method of counting leucocytes should make such an examination more frequently available at the bedside than is now the case. Especially should its rapidity recommend it to the surgeon in urgent cases. With a half-ounce bottle of acetic acid, an Abbé Zeiss slide, and a 1 in 10 (white) pipette, in the great majority of cases he can gain in five or six minutes as much information from the blood as the report of a skilled pathologist, whose services are not always to hand, would tell him after three hours' detailed examination. In the case of his using a strange microscope he would require another minute. Incidentally he could also observe such phenomena as diminished coagulability, as occurs in septicæmia, the degree of anæmia, with about 15 per cent. possible error, possible presence of myelocytes, &c. An extended use of leucocyte counts in acute surgical cases should reveal facts of great value and one would also expect that these facts would appear to the surgeon in a different light when they are based on physical signs he has himself directly observed than when they are brought to his notice in the report of an expert and based on unfamiliar methods.

B.—THE DIFFERENTIAL COUNT.

We will under this heading only consider two fallacies which to a great extent detract from the value of this mode of examination.

1. As a rule the result of the count is stated in percentages, a method which begins to mislead as soon as the total leucocyte count deviates from the normal. The classical controversy on the subject of eosinophilia in leucocythæmia is a good instance of the error. Ehrlich over 20 years ago stated that in spleno-medullary or myelocytic leucocythæmia the number of coarse eosinophilous leucocytes is increased; he meant by that statement that there are more eosinophiles present per cubic millimetre than normally, a fact which of late years has been generally recognised. The accuracy of his observations was, however, for some time widely denied simply because workers at the subject chose to confound relative with absolute differential counts. In other words, finding that eosinophiles were present to the extent of under 2 per cent., they concluded that Ehrlich's statement was wrong, quite failing to take into consideration the enormous total count of leucocytes. Well, the error at the root of the foregoing confusion is at present being continually perpetrated. The fact that the polymorphonuclear (fine oxyphile) cells constitute 90 per cent. of the total conveys a very different significance if correlated with a leucocyte count of 12,000 than if with one of 6000; in the one case their absolute number is greatly increased, in the other it is diminished. Similarly, there is absolute lymphopenia if the total count is 3000, although the lymphocytes constitute 60 per cent. of the whole. It may be said that these last remarks are truisms the importance of which is widely realised. If that be so, how is it that one so constantly meets with statements both in print and verbally, such as this, "In this disease the large hyaline lymphocytes are greatly increased in number and may reach 12 per cent. of the whole leucocytes," or "In this case the eosinophiles have risen to 8 per cent.," statements which may or may not be true but which are certainly put in a misleading manner? To say that "the eosinophiles have increased in number to 8 per cent." when as an actual fact there may be fewer present than normal is clearly not a precise use of language. If 10,000 be taken for memory purposes as being the normal number of leucocytes per cubic millimetre—and, indeed, high authorities, including von Limbeck, claim that this is the actual number—it is easy to remember that any deviation from the following is abnormal and may be pathological.

Fine oxyphiles	6500 per cubic millimetre.
Coarse oxyphiles (eosinophiles)	300 ,, ,, ,,
Small lymphocytes	2500 ,, ,, ,,
Large lymphocytes (including transitionals)	600 ,, ,, ,,
Fine basophiles	100 ,, ,, ,,

[8] Method recommended. Equivalent to the counting over 1600 squares, as each field contains 32 squares.

I would therefore urge that each class of corpuscle—erythrocytes, leucocytes, or any variety of the latter—be always described in absolute numbers. We have of late years discarded the relative count in the leucocytes as a class, why not for precisely similar reasons do the same with each variety of leucocyte separately?

2. The second and more important source of error is the one arising from paucity of data. In no department of medicine is the principle of basing conclusions on sufficient statistical data so flagrantly violated as in hæmatology. Only a few weeks ago a paper was published in one of the medical journals in which most unusual conclusions were reached from a consideration of a differential count of *40 leucocytes*. Here is a case where the results of a so-called blood examination can be mathematically demonstrated to be literally without any value. Reports of a differential count do not very often, except in cases with a high leucocytic count, refer to the examination of 500 leucocytes; only too frequently they refer to 100 or 200 corpuscles and sometimes to even fewer. In any case the value of the statements made is, as a rule, greatly detracted from by the vital omission of stating the number counted.

If we apply Poisson's formula[9] to this subject we find that the limits of error from this source alone are as follows:—

No. of corpuscles count.	Leucocyte under consideration.	Stated percentage.	Possible error.
100	Lymphocyte.	40	14 per cent.
200	,,	40	9·8 ,,
500	,,	40	6·2 ,,
1000	,,	40	4·4 ,,
100	Eosinophile.	5	6·0 ,,
200	,,	5	4·3 ,,
500	,,	5	2·8 ,,
1000	,,	5	1·9 ,,

In other words, in a report, submitted from an examination of 100 corpuscles to the effect that the lymphocytes constitute 40 per cent. of the whole and the eosinophiles 5 per cent., in reality the former may be present in any proportion from 26 to 54 per cent., and the latter in any proportion up to 11 per cent. In the instance above mentioned, when 60 per cent. of 40 leucocytes were lymphocytes, the truth is that the proportion of lymphocytes actually present may have been anything between 38 per cent. and 82 per cent., the possible error amounting to 22 per cent.

When one reflects that the above error is merely due to one source—paucity of data—and does not take into consideration what may be possibly equally great sources, such as lack of sufficient expert knowledge in recognising the group into which a given cell should be assigned, faulty technique in making the previous total count, and so on, one ceases to wonder at the sceptical attitude adopted by so many clinicians towards the value of blood examinations except in a small selected group of blood diseases. The pessimistic attitude of the hæmatologist may also be thus accounted for, seeing that his tedious labours produce such fruitless and inconsistent results. The remedy for this state of things lies, to my mind, in doing less differential counts. When a blood examination is required by a physician there is no question but that, amongst other things, stained films of blood should always be examined. But in five-sixths of the cases quite sufficient information for clinical purposes in the present state of our knowledge can be obtained by spending 10 or 15 minutes at a study of three or four films. Any abnormality of the white corpuscles which would escape notice on the part of a skilled pathologist after such an examination can but very rarely be of any importance. In the remaining list of cases, when the physician desires a differential count done for a specific reason and not, as is sometimes the case, on the lines of a forlorn hope, the examination of at least 500 or 1000 corpuscles should be undertaken. In short, let us have one valuable count instead of half a dozen counts of dubious value. An extensive examination is easy enough in cases with high

[9] If m and n be the numbers in two groups, so that $m + n = \mu$, the total number in the group, then the ratio of m to μ will be within the limits of the formula $\frac{m}{\mu} \pm 2\sqrt{\frac{2mn}{\mu^3}}$.

leucocytic counts, but in leucopenic cases it involves making a large number of films, especially as some of the best films, such as those produced by the capillary suction and graduated pressure method, cover a comparatively small area. In such cases a good method to adopt is to spread a long layer of blood directly on to a prepared slide by means of a strip of gold leaf, staining as usual but using no cover-slip. This gives an extensive surface but a poor film and one of variable thickness.

TRAUMATIC GANGRENE OF THE SCROTUM WITH ALMOST ENTIRE SEPARATION; RECOVERY; PLASTIC OPERATION FOR FORMATION OF NEW SCROTUM.

BY A. GRAINGER BISSET, M.B., CH.B. GLASG.,
HOUSE SURGEON TO THE VICTORIA INFIRMARY, GLASGOW.

THE patient, a man, aged 43 years, was admitted to the septic wards of the Victoria Infirmary, Glasgow, on Saturday, Nov. 21st, 1903, with an acute gangrenous condition of the entire scrotum. His story was that on the Tuesday previous he was supporting one of the rear corners of a big heavy concrete board which was being carried by six men. The two men in front of him suddenly and without warning let slip their hold of the board. The weight thus all at once devolved on patient and he made a great effort to support the board at his corner until things were righted. In this endeavour, he said, the corner of the board must have grazed down the front of his trousers, but whether at the same time it caused any injury to the scrotum he was quite unable to say. He stated, however, that almost immediately he experienced a peculiar shock pervading his whole system, a curious sensation which he could only compare with an electric shock passing through the body. He had to cease work at once and he managed with difficulty to get home, walking part of the way. Feeling very ill he went to bed straightway, had a rigor, felt hot and fevered, and was unable to take any food at all. Pain, sharp and severe, came on across the lower part of the abdomen and was felt pretty acutely about the scrotum. That night he seems to have been delirious and unable to sleep; he had no trouble whatever with micturition either then or later. For the next three days he lay in a half-dazed condition, unable to eat or to sleep, and not knowing what was going on around him. In this state he was seen by a medical man who recognised the gravity of the case and sent him into hospital.

On admission the patient was in a very low state: the temperature was 103° F., the pulse was 100 per minute, and the general appearance was one of collapse. Free stimulation was carried out and five grains of quinine hydrochlorate were given every four hours. The whole scrotum was greatly swollen and distended so as to be about the size of a cocoanut. It was boggy and œdematous to the feel, pitting deeply on pressure. The skin of the entire scrotum, with the exception of a small area above, just below and by the side of the penis, was a mass of foul-smelling, soft, pulpy, yellow slough. There was a fairly sharply marked-off line of demarcation above, where the slough was separating from the small portion of healthier skin left. Behind and below, the line of separation was at the junction of the scrotum with the thighs. The testicles felt considerably enlarged and somewhat hard. The penis was quite unaffected; it was not even swollen in the least. The urine was normal throughout. The whole of the gangrenous mass of tissue was now cut away with scissors along the line of separation and a large amount of soft yellow sloughy material within was cleaned away from about the testicles. These organs were thus entirely exposed. This condition is well shown in Fig. 1, where it will be seen that the three little tags of skin are all that escaped the gangrenous process. The parts were now treated with a wet boric dressing, covered with charcoal to minimise the extremely offensive odour. This dressing was changed about every two hours at first and less frequently as the gangrenous condition subsided. A small sloughing patch appeared in the left testicle but did not persist. In about a fortnight the sloughing had almost ceased and the parts began to be covered with a fine granulating surface. The discharge was examined and the streptococcus brevis was found to be present. A thin yellow exudate continued for a time but improvement followed treatment of the parts with Hey's wash. As the whole surface was now looking clean and granulating rapidly it was decided to perform a plastic operation for the formation of a new scrotum and this was done in two stages by Mr. R. H. Parry.

FIG. 1.

The parts before operation, showing the testicles exposed and the three little tags of skin, all that was left of the original scrotum.

The operation was proceeded with on Dec. 26th. The edges of the three small pieces left of the original scrotum were first pared and trimmed. An incision was then made along the inner aspect of the thigh commencing a little below the level of the lower extremity of each exposed testicle; the knife was now carried up towards the pubes, turned outwards and brought back again parallel with the

FIG. 2.

Condition of the parts after the first operation, showing the flaps of skin attached by their pedicles to the thighs and the new median raphe where the flaps come together in the middle line. The incomplete closure below is also seen.

first incision, so that an elliptical flap of skin was marked out; its lower end was left attached to form a pedicle. The flap was then raised and brought across to cover the testicle. These proceedings were carried out on both sides. The two flaps were next united in position in the middle line by horse-hair sutures and joined above to the remnant

of the original scrotum by ligatures of fine catgut. The pedicles of the flaps were left adherent to the thigh at their origin, the under portion of the testicles being thus uncovered meantime. The gaps in the thighs where the flaps had been taken from were closed with silkworm gut sutures after undermining the adjacent skin. Finally, the parts were covered with iodoform gauze and the usual aseptic dressings were applied. The grafts took splendidly and on the tenth day after operation the stitches were removed; it was then found that the flaps of skin were apparently growing downwards and backwards so as partially to cover over the gap that existed below. Fig. 2 (a reproduction of a photograph taken at the time) shows the condition. The two flaps are seen here still attached by their pedicles and the incomplete closure below is also shown with the new median raphe running upwards from it.

On Jan. 19th the second stage of the operation was entered on. The pedicles of the flaps were cut through on both sides and brought together so as to cover in the testicles below and behind, the covering being slightly incomplete behind. The edges were refreshed but no stitches were used except to close the wounds in the thighs. The parts were kept apposed with iodoform gauze wrapped round the new scrotum. The operation was a perfect success and on Feb. 20th the patient was able to get up. On March 5th he was sent to the convalescent home at Largs. Fig. 3 shows

FIG. 3.

Condition of parts at present time showing the new scrotum now quite complete and healed. The left testicle still remains true to nature in hanging lower than the right.

the present condition of the parts. The flaps have grown in behind and the scrotum is now quite complete; testicular sensation is apparent and the patient has no discomfort whatever beyond a little stiffness in walking.

The common cause of gangrene of the scrotum is extravasation of urine into the cellular tissue and the tissues here are so lax that the gangrenous process spreads with great rapidity and these cases, if untreated, are usually fatal long before the slough is ready to separate. The traumatic variety is equally fatal. Any wound may light up the condition, from a mere scratch which escapes notice at the time to an extensive laceration of the parts, especially when septic inoculation has taken place at the site of injury. An idiopathic variety of gangrene of the scrotum has been described, but from what we know of the pathology of these conditions it seems most probable that in all such cases some slight abrasion of the scrotal integument, perhaps too insignificant to demand notice, has paved the way for the entrance of virulent organisms. The interest in the present case lies in the recovery of the patient from so acute an infection, a termination practically unknown in such cases.

I have to express my indebtedness and thanks to Mr. Parry for his courtesy in enabling this case to be published.

Glasgow.

A CASE OF

MANIA FROM TRAUMATIC MENINGITIS; TREPHINING; EVACUATION OF SEROUS EFFUSION; COMPLETE RECOVERY.

BY CHARLES BROOK, M.R.C.S. ENG.,

CONSULTING SURGEON TO THE LINCOLN COUNTY HOSPITAL.

IN July, 1902, a man, aged 20 years, when diving struck his forehead violently on the bottom. He was not rendered unconscious but got out of the water and went home complaining a little of his head. From that day his manner changed. Naturally quiet and gentle, he became irritable and excitable, at times morose and sulky, and within a month from the blow he had paroxysms of violence. His mother observed a swelling on the forehead two inches above the right eyebrow and drew the medical attendant's attention to it. When three years old he bruised his forehead on the same spot and for three weeks was more or less unconscious. In September an eminent London mental physician saw him and advised his removal to an asylum. In October another London physician gave much the same advice and both thought gravely of the case. For three months he had complete change and quiet with a medical attendant on the Yorkshire moors and in the country but got gradually worse and becoming dangerous on Jan. 3rd, 1903, was put into the Lawn Lunatic Asylum at Lincoln.

Six weeks later I saw him for the first time by his mother's desire, she being firmly impressed with the belief that his insanity was connected with the swelling on the forehead. He approached me in a most threatening manner with both fists doubled and appeared to have difficulty in restraining himself from attacking me. There was a distinct swelling of the size of a florin on the right frontal bone, which was rather red, and he flinched a little on pressure. After careful examination I advised trephining and this being later confirmed by Sir Victor Horsley I removed him from the asylum and trephined him with a three quarter inch trephine on Feb. 24th. The bone was rather thin and very hard and white with no diploë and it was slightly bulged outwards. The dura mater was intact and perfectly healthy but in a few seconds was bulged out level with the surface. I opened it and let out about three ounces of clear serum and then, having stitched up the dura mater, closed the wound; the periosteum having been previously stripped off the bone there was a good thick pad of covering. The wound was perfectly healed when the sutures were removed on the fifth day.

On recovering consciousness from the anæsthetic the patient expressed himself as feeling all right and never from that moment has he shown the slightest sign of mental disturbance. On the third day a pleasant smile natural to his boyish face returned, having been totally absent for more than six months. It is now more than a year since the operation and he is as bright and well as ever he was in his life.

Lincoln.

A SANATORIUM FOR CONSUMPTIVES FOR MIDDLESEX.—At the Westminster Guildhall on Monday afternoon last Mr. Montagu Sharpe, vice-chairman of the Middlesex County Council, presided at a renewed conference of Middlesex authorities engaged in discussing the establishment of a sanatorium for consumptives for the county of Middlesex. A scheme was presented that the sanatorium should be for 100 patients, 50 of each sex; that the boroughs and local authorities should maintain 50 beds; and that the remainder should be maintained by public subscriptions, trade firms, friendly societies, and private individuals, the management of the sanatoriam being vested in those who established and supported the various beds and carried out by an executive committee. Mr. Sharpe said that all the authorities in Middlesex with the exception of eight had concurred in the scheme. It was thought by some speakers that the cost would be prohibitive for small authorities but a motion adopting the scheme was passed.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

SUSSEX COUNTY HOSPITAL.

A CASE OF CENTRAL GLIOMATOSIS OF THE SPINAL CORD; COMPLETE PARAPLEGIA; NORMAL DELIVERY AFTER INDUCED LABOUR.

(Under the care of Mr. T. H. IONIDES and Dr. E. HOBHOUSE.)

A WOMAN, aged 23 years, went to the out-patients' department of the Sussex County Hospital in January, 1903, complaining of pain in the lower lumbar region going down to the left leg which Dr. Hobhouse took to be sciatica. She attended twice without improvement and was then lost sight of until August, 1903, when she was in the West-street Hospital for Women, under the care of Mr. Ionides, with complete paraplegia. He asked Dr. Hobhouse to see her who found that she had complete loss of sensation and motion up to about the middle of the dorsal region, with paralysis of the sphincters. From the history of the case and the onset of the symptoms, which had gradually extended upwards, the diagnosis seemed to lie between a tumour of the cord itself and one immediately outside pressing on the cord, to which latter hypothesis Dr. Hobhouse was himself inclined. There was no evidence of any vertebral disease which could cause a pressure myelitis. The history she gave was one of severe pain in the back extending down to the left leg, with gradually increasing loss of power and feeling in that leg. The pain was of a cramplike character and more severe at night. By the end of February the loss of power and feeling in that leg was complete. The first symptom actually noticed was numbness and loss of feeling in the left great toe. About the beginning of May she began to lose power in the right leg and by June the paraplegia was complete, but the loss of control over the sphincters was not absolute till the middle of June. On August 3rd, the fœtal movements having ceased and the heart being no longer heard, labour was induced and normal delivery took place. Not long after she was transferred to the Sussex County Hospital, where the history was one of loss of sensation and motion gradually spreading upwards, with progressive wasting, rigidity, and involuntary contractions of the leg muscles. On Sept. 15th she had a fit with tonic spasm chiefly of the left side; she was cyanosed, with a very feeble pulse and very weak respiration. This recurred on the 21st, preceded by very severe pain in the head, and there were frequent minor attacks. In October she complained of continuous headache and had frequent vomiting; on examining the eyes Dr. Hobhouse found well-marked optic neuritis which was confirmed later by Mr. W. W. Griffin. This gradually increased till it became intense, with great swelling of the discs and numerous hæmorrhages. On Jan. 6th she had completely lost power in both arms and the area of anæsthesia had spread up to the lower border of the jaw. She could move her head very slightly but could not perform any other movement. She continued to have severe headache, occasional vomiting, and slight apoplectiform attacks from time to time, but these were less severe during the last two months of life. The pulse was variable, often not more than 50 per minute but occasionally running up to 80. The body was wasted to a skeleton before death. It is much to be regretted that temperature sensation was not recorded.

Necropsy.—At the necropsy nothing was found until the spinal cord was reached. Very careful sections of the brain as far down as the lower level of the medulla revealed nothing abnormal to the naked eye. On removing the cord, however, it presented a curiously tuberculated appearance, the lower portion looking as if it had been constricted by ligatures at regular intervals of about three-quarters of an inch and then become swollen. On sections in the lumbar and dorsal regions the substance was much firmer than usual, of a uniform dead white, and all traces of the normal columnar divisions were lost, being replaced by an apparently almost homogeneous new formation which was visible to the naked eye well up into the cervical region but was then lost. The vessels of the pia mater were intensely congested all up the cord. The report of the Clinical Research Association showed that the growth was of the nature of a central gliomatosis of the syringomyelic type, its features pointing rather to the acquired and rapidly developing variety than to the congenital form. It was most extensive in the lumbar region where the whole of the posterior and much of the lateral column of the cord were invaded. In the dorsal region the growth occupied more clearly, and in the cervical still more clearly, the posterior columns. The anterior horns were little disturbed throughout. The remains of the central canal were with difficulty recognised in the cervical region, being absent lower down, but there were numerous fissures and cavities with contorted or frilled outline and not lined with epithelium. The growth was not encapsuled.

Remarks by Dr. HOBHOUSE.—There are one or two points of interest in this case which are worth notice. 1. As might be expected from the pathological report, the sensory symptoms all through preceded the motor, the growth certainly having originated in the posterior columns. 2. The relatively long interval which elapsed between the commencement of the symptoms on the left and on the right side—viz., three months; a strong point against myelitis. 3. The termination of the case with all the symptoms of tumour in the skull, especially intense optic neuritis and most severe headache. 4. The great vertical extent of the new growth which began definitely with symptoms referred to the left great toe and extended from the lower lumbar region certainly as high as the medulla oblongata. There is another point of considerable general interest—viz., whether the activity of the lumbar centres caused by marriage and pregnancy had any share in exciting the embryonal neuroglial remnants into active growth. I have now under my care a similar case which may, however, be an anomalous myelitis, in which the symptoms dated from the first pregnancy and have been greatly increased by the second. Further, it has long been noticed that cases of insular sclerosis were much affected for the worse by pregnancy, and in three cases seen during the last six years I have noted that the earliest symptoms, affecting the legs and lumbar centres, were dated from pregnancy.

Notes on the pregnancy by Mr. IONIDES.—It is interesting to note that the pregnancy ran a normal course up to the eighth month, when the fœtus died some weeks after the paraplegia had become complete. Labour was induced on this account and in order to avoid septic complications by means of tents and Champetier de Ribes's bag. It proceeded normally and was absolutely painless, the patient feeling nothing. The uterus subsequently contracted normally, showing clearly that the intrinsic nervous mechanism of the uterus is sufficient for labour. Prior to the death of the fœtus the uterus contracted spasmodically. Labour lasted about 20 hours and the recovery was complete in all respects. It should be noted that not only was labour painless but the patient was not even conscious at any time that it was going on, so that not even the sympathetic system seems to have come into play.

NEWCASTLE-UPON-TYNE ROYAL INFIRMARY.

A CASE OF JACKSONIAN EPILEPSY; TREPHINING; TEMPORARY RECOVERY; DEATH FROM ACUTE ŒDEMA OF THE BRAIN.

(Under the care of Dr. THOMAS OLIVER and Mr. W. G. RICHARDSON.)

For the notes of the case we are indebted to Dr. Alfred Parkin, senior house physician.

The patient, who was a strong healthy man, aged 30 years, was admitted into the Newcastle Infirmary on May 7th, 1904, under the care of Dr. Oliver, suffering from paralysis of the right arm and leg and from recurring convulsive seizures limited to the right side of the body and attended by momentary loss of consciousness. For the last six months he had complained of severe pain in the head referred to the left frontal and parietal region. Occasionally he vomited when the headache was severe. The pain at first was not constant.

During the last three weeks headache had been fairly constant, although worse at some times than others. When the pain was unusually severe there were temporary loss of speech and a considerable amount of twitching of the right side of the face and of the right arm. Ten days previously the right leg also began to twitch. It was then that he had his first convulsive seizure. He fell down in a fit and was for a few minutes unconscious. On regaining consciousness he found that he had completely lost the power in his right arm. This arm remained paralysed afterwards. Three days after the first fit he had other two convulsive seizures in rapid succession. Six days previously the fits began to come more frequently, being separated from each other by about ten minutes' interval; at this time the right leg also became paralysed. When seen by Dr. Oliver and Mr. Richardson the day after his admission into the infirmary the patient was having right-sided epileptiform seizures every ten minutes. The fits kept recurring without any aura or warning. In a moment the head and eyes would be suddenly turned to the right, the paralysed arm would be suddenly lifted upwards and outwards and maintained thus in a condition of violent tremor, the paralysed leg would be drawn upwards, flexed at the knee, and made tremulous, while the right face was profoundly distorted and convulsed. The patient tended, generally speaking, to roll over to the right. The convulsions were severe but they only lasted about three-quarters of a minute. The movements never passed to the left side of the body. Consciousness was momentarily lost during the height of the seizure but once the convulsions ceased the patient could readily answer questions. Now and then during an epileptiform attack micturition was involuntarily performed. On percussing the skull the patient complained of pain over the left parietal region. Although the right side of the face and the right arm and leg were paralysed there was no loss of sensation. There was slight double optic neuritis; the temperature, pulse, and urine were normal and the internal organs generally speaking were healthy. 12 years ago the patient had syphilis. As the fits kept recurring every few minutes notwithstanding medicinal treatment and signs of exhaustion were becoming apparent it was decided, after carefully reviewing all the facts of the case and explaining the risks to the patient, to trephine the skull on the grounds that there might be some adherent and thickened membranes that could be separated or a growth, probably specific, that might be removeable.

The operation was performed by Mr. Richardson. The skull was trephined over the left motor area and the opening was enlarged until it was about two and a half inches in diameter. The dura mater gradually bulged out and was incised crucially. It was found to be extremely adherent to the surface of the brain towards the posterior part of the opening and a gentle attempt was made to separate as far as possible the adhesions. This was extremely difficult without tearing the brain tissue; besides the adhesions extended further back than the opening. No tumour or gumma was found. The dura mater was not closed nor was any of the bone replaced. The skin flap was sutured in the ordinary way. No drainage was required.

When seen by Dr. Oliver on the following day the patient seemed on the whole to be fairly well. He replied to questions quite readily and seemed to be free from the embarrassment and impending dread observed on the previous day. There had been no fits for seven hours. He could lift the right arm quite easily and could draw up and push down the right leg. The only disappointing feature in the case was that at 4 A.M., one hour after the last fit, the temperature had suddenly risen to 105·4° F. and the pulse to 168, but by the time of Dr. Oliver's visit the pulse and temperature had fallen to the normal and the patient expressed himself as feeling comfortable. Later in the evening the temperature again began to rise and by 8 A.M. on the following morning—i.e., on the second day after the operation—the thermometer registered 104·4°. The patient after this gradually passed into a state of coma in which he died.

Necropsy.—Permission was only given to examine the brain. The skull cap was thickened. On removing the brain a large quantity of serous fluid escaped from the base and from the intradural space. The dura mater was found to be tensely adherent to an area fully two inches in diameter at the posterior portion of the left Rolandic area. It could not be separated without tearing the brain tissue. The inner surface of the skull corresponding to this area was fawn-coloured and was somewhat rougher than elsewhere. No gumma or tumour of any kind was found. The brain substance, especially of the left hemisphere, was pale, swollen, and œdematous. The blood-vessels at the base of the brain seemed to be perfectly healthy and gave to the naked eye no evidence of syphilitic changes.

Remarks by Dr. OLIVER.—From the point of view of diagnosis alone or of treatment the above case would be worthy of being recorded, but it is doubly so on account of the rather unexpected and somewhat unexplained manner in which death came after relief had been given to brain tension and motor power had returned.

Medical Societies.

MEDICO-LEGAL SOCIETY.—The last ordinary meeting of the session of this society was held on June 14th, Sir William J. Collins, the President, being in the chair.—Mr. R. Henslowe Wellington considered the fallacious verdict: "Suicide whilst temporarily insane." The word "suicide," coined about 1650, meant self-murder and not merely self-killing, hence the verdict was a "pious perjury" by a jury who refused to countenance the pristine post-humous sanctions consequent on a verdict of "*Felo de se*." The last case of burial at the cross roads was in 1823. There was no legal or canonical authority whereby buildings or burial grounds might be "consecrated."—Dr. T. Claye Shaw, as an alienist, thought that lawyers naturally strove to gain an acquittal in these cases. Nearly all suicides resulted from stress and worry, leading to mono-ideaism, the fatal act being often the patent symptom of the onset of insanity.—Mr. J. Troutbeck held that juries, considering the social side of the case, strove to soften the blow to relatives and in so doing ignored technicalities.—Dr. F. J. Smith regretted too fixed and rigid legal formulæ.—Dr. W. McCallin read a note on the anomalous differences in the methods whereby a lunatic was certified for detention, the relative clinical condition of the patient not being a ground for the variation in procedure.—Earl Russell suggested that the position of lunatics, when confined, led to special safeguards being necessary in the cases of the well to do.—Mr. Troutbeck and Dr. E. Claude Taylor criticised the action of the Metropolitan Asylums Board in treating demented senile paupers apart from the provisions of the Lunacy Acts.—Earl Russell read a very practical paper on the Weight to be Attached to Medical Evidence. The value of skilled testimony had largely increased *pari passu* with the intrinsic advance of the knowledge and capacity of scientific witnesses and also with the general intellectual development of modern jurors. The authority of all medical certificates must finally be judged solely by medical men. Medical assessors should assist judges and juries who were puzzled by conflicting expert opinions. Referring to the sterilisation of "the unfit" after medical certification he said: "If the educated classes understood the question they would act, that is, if the community was sufficiently educated to allow it."—A keen discussion followed and was maintained by the President, Dr. R. J. Collie, Dr. S. B. Atkinson, and others.

THE COLONIAL NURSING ASSOCIATION.—The eighth annual report of the Colonial Nursing Association is a very satisfactory document, showing that the work of the association continues steadily to develop. The total number of nurses at work during the year 1903 has been 109, 81 of whom were employed by the Government and 28 as private nurses. In 1902 the total was 97, 73 being Government and 24 being private nurses. Each year shows an increase in the total number of nurses employed and each year the number of desirable applicants becomes larger. The funds at the disposal of the committee enable it to carry on the work of the association within its present limits but are not sufficient to enable it to develop that work in many ways which would be most desirable. The committee hopes, therefore, that there may be an increase in the number of annual subscribers, as with more funds at its disposal it could greatly increase the association's sphere of usefulness. There is no doubt that the demand for trained nurses in the colonies and India is one that is growing. The need for them is an established fact and the only obstacle to their universal employment is the lack of funds, both to supplement local effort and to provide for the necessary increase in office expenses.

Reviews and Notices of Books.

International Clinics: A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles on Treatment, Medicine, Surgery, Neurology, &c., by leading Members of the Medical Profession throughout the World. Edited by A. O. KELLY, A.M., M.D., with various Collaborators. Vol. I. Fourteenth Series. London: J. B. Lippincott Co. 1904. Pp. 304.

THIS volume which has just been issued contains many articles of interest on treatment, medicine, surgery, gynæcology, and neurology, together with a valuable review of the progress of medicine during 1903. It would be impossible in the space at our disposal to notice even cursorily in a satisfactory manner each separate paper. We must confine ourselves, therefore, to a few of the more important. One of the most interesting of the lectures is the opening one on the Chloride Reduction Treatment of Parenchymatous Nephritis by Dr. F. Widal and Dr. A. Javal of Paris. One of them had previously shown with M. Lemierre that the daily absorption of ten grains of common salt in four cases of arterio-sclerosis produced no ill effects, whereas in two out of three patients suffering from parenchymatous nephritis extensive œdema arose. The authors made further investigation on this point and they conclude that the albuminoids of animal origin, such as those of milk, are less harmful than are those of meat because of the absence of salt in the former. Salt alone, they find, may be the cause of recurrences of œdema and increase in albuminuria. They also demonstrate the fact that a variety of forms of solid foods, provided no salt be added to them, may be helpfully ordered in treatment.

Dr. R. W. Wilcox in his paper on Adonidin shows that its use is largely indicated in cardiac diseases in which a rapid pulse of low tension is a notable feature. He considers it an excellent substitute for digitalis in cases where there is idiosyncrasy and thinks its action to be more permanent and to be less vaso-constricting than the latter. Next follows a paper on General and Gastric Neurasthenia which will well repay perusal. There is also a good article on the Therapeutic Applications of Colloid Silver.

In the section on medicine, Dr. N. S. Davis in his lecture on Pneumonia discourses on the increased prevalence and mortality of the disease during the last 60 years. He considers that this increase is not due to any climatic changes or to any predisposing effects of articles of food. But with regard to alcohol he shows that more than 1,000,000,000 dollars are paid annually by the people of the United States of America for alcoholic liquors and that alcohol is one of the most important predisposing causes of the disease, not only in the individual himself but also in his posterity. Again, the constant migration of the youth of both sexes from the country to the towns by impairing their vigour adds to the predisposition to pneumonia. In the actual treatment of the disease we are glad to see that the author gives a prescription containing antimony which is sometimes a valuable drug in the early treatment of the affection. Dr. Henry Catteil contributes a paper on Cryoscopy as regards its practical application to medicine. It may sometimes afford a valuable means of determining the presence or absence of renal and cardiac insufficiency and be useful in medico-legal cases, as in drowning and in differentiating the blood of certain animals.

Another valuable paper is that by Dr. T. Walsh on the Early Diagnosis of Pulmonary Tuberculosis. Here it is pointed out that percussion cannot be depended on with any assurance. With regard to auscultation, this is much more helpful, especial attention being directed to any prolonged expiration over a limited area. Inspection also shows in these cases a distinct lagging of the affected lung in expansion at a very early stage of pulmonary tuberculosis. Attention is directed to the Litten phenomenon. The importance of the recognition of an increased rapidity of the pulse is insisted on; the loss of weight is also a danger signal. All the above symptoms are highly suggestive of tuberculosis when taken together notwithstanding the absence of tubercle bacilli.

The surgical section contains lectures on Angioma, Intestinal Anastomosis, Complications met with in the Surgical Treatment of Diseases of the Testicle, and a Review of Abdominal Surgery as seen in the German clinics.

In the section on the Progress of Medicine during 1903 an interesting observation by Dr. A. Hamilton on the Dissemination by Flies of Typhoid Fever is recorded. The bacterial origin of acute rheumatism receives support from the work of Dr. E. W. A. Walker and Dr. F. Meyer. The report on Sleeping Sickness details the successive steps in the discovery of its nature. Some beautiful plates illustrate the subject of Cancer of the Stomach. The various infective fevers receive due recognition but considerations of space, as we have stated above, forbid the enumeration of all the valuable contents of this excellent volume of the well-known International Clinics.

Physiology and Pathology of the Urine with Methods for its Examination. By J. DIXON MANN, M.D. St. And., F.R.C.P. Lond., Physician to the Salford Royal Hospital, Professor of Forensic Medicine in the Victoria University of Manchester. With Illustrations. London: Charles Griffin and Co. 1904. Pp. 272. Price 8*s.* 6*d.*

THIS book, as might safely be anticipated, is completely in accord with modern advances as regards the chemistry of the urine and the clinical significances of analytical results. The author has taken considerable pains to embody the most recent work on the subject and, besides describing those strictly clinical methods used in the recognition and determination of urinary constituents, he has given indications of the directions in which further research would be valuable. For the most part the work deals with the chemistry of the urine and of urinary sediments and the influence of metabolism on its composition. In the last section urine in its pathological relations is considered. The description of analytical methods is very satisfactory and comprehends those improved modifications which have received recent adoption and approval. In describing the titration methods of the estimation of glucose in urine we note that the excellent process of Gerrard is described in which potassium cyanide is added to the Fehling solution. The author also refers to the simple modification of the Fehling method which consists in adding a little inert powder, such as barium sulphate or calcium carbonate, to the copper solution. By adopting this plan the red cuprous oxide is rapidly removed so that the colour of the supernatant liquid can readily be determined. In describing Pettenkofer's test for biliary acids in urine the author states that when applied to a complex liquid like urine, especially in the presence of bile pigment, it is "absolutely unreliable." We have found that by using a solution of glucose instead of grape sugar in sulphuric acid the results are much more satisfactory. Another modification of the test may be usefully made by extracting the acidulated urine with ether. On evaporation of the ether a residue is obtained which in the presence of bile acids in urine gives a beautiful reddish-purple colour with the glucose sulphuric acid mixture. Glucose has the advantage that it does not readily char in cold sulphuric acid, while cane sugar has a decided tendency to do so. It is difficult nowadays to select from the great number of books written on the chemistry, physiology, and pathology of urine one that is better or more authoritative than another, but Professor

Dixon Mann has given us a work which at least is completely in accord with the latest developments of the subject; which shows his own practical acquaintance with the details of these developments; and in which, moreover, no subject of importance is omitted.

A Monograph of the Culicidæ or Mosquitoes. Vol. III. By F. V. THEOBALD. London: Printed by order of the Trustees of the British Museum. 1903. Pp. 359 and 17 Plates.

THIS volume, which is the third of a series already noticed in these columns, brings our knowledge of the culicidæ up to date and is in reality a supplement to, rather than a continuation of, those volumes. The relative insignificance of the existing knowledge of these flies is amply shown by the fact that the present volume, published only two years after the first two, affords to the student a mass of information nearly, if not quite, half as great as that contained in those two original volumes. To the trustees of the British Museum the thanks of zoologists are due for their prompt and thoroughly justifiable liberality in the matter of expenses. It is to be hoped that this activity will not slacken and that after such intervals as may be necessary for the accumulation of the requisite amount of material other supplementary volumes will be issued as soon as may be. As is the case with the first instalment of this work Mr. Theobald prefaces the present volume by some general notes of interest upon structure, habit, and a variety of topics relating to these diptera, of which he treats in systematic detail in the subsequent, and far larger, section of the book. The ways of mosquitoes appear to be capricious, at least in the present state of our knowledge of their life-histories. From tables compiled by, or furnished to, the author it would seem that in some parts of this country anopheles is more domesticated than culex—i.e., that it frequents houses more abundantly, but no general statement can be made upon the matter which is of obvious importance from the point of view of infection since "in other places anopheles do not occur indoors at all." From an elaborate diagram of the occurrences of anopheles and culex in the neighbourhood of Pretoria during the months of December to April it seems that culex is most abundant in December, January, and April; anopheles, on the other hand, attains to its maximum in January, February, and March. Considering the enormous number of different genera and species it is clear that we can only be at the very beginning of anything like adequate knowledge of the mode of life of different forms; it is therefore most important to do as Mr. Theobald does and to quote any information as to habits that comes to light from trustworthy correspondents. Mr. Theobald receives and acknowledges in the volume before us a vast deal of assistance from medical men residing abroad and appreciatively refers to their contributions to the biology of these diptera. There are also some valuable observations of his own. In order to exterminate a species of mosquito from a given neighbourhood it is not enough always to destroy the larvæ in the pools and the perfect insect at rest. There are still the eggs to be reckoned with. And it is plain that these eggs, like the eggs of many others among the lower animals, are highly resistant to adverse influences. "Through the kindness of Dr. Finlay," writes Mr. Theobald, "I received some ova of stegomyia fasciata from Cuba. Owing to stress of work these were neglected, being left in the dry glass tube for two months after their arrival in the country. Out of curiosity I placed them in water, with the chill off, in a greenhouse. About 12 o'clock A.M. the next day most of the eggs had hatched and the larvæ were very active." But desiccation does diminish the activity of a batch of eggs, for it was found that "out of about 50 only six reached maturity, the pupal stage, and these produced one female and five males." Now stegomyia is one of the most virulent of mosquitoes, for it has been proved that it is this insect which conveys yellow fever. It is obviously, therefore, easy for the insect to be imported accidentally to this and other countries, as, indeed, is shown by its world-wide range. To cope successfully with stegomyia it must be remembered that it is less vulnerable in the egg stage than in later stages.

This volume, like its predecessors, is mainly systematic, but, as will have been gathered from the few remarks offered here, it contains a considerable amount of information useful to the colonist and to the medical man who lives in fever-haunted districts.

Wounds in War: the Mechanism of their Production and their Treatment. By Surgeon-General W. F. STEVENSON, C.B., A.M.S., Professor of Military Surgery, Royal Army Medical College, London. Second edition, with 127 illustrations. London: Longmans, Green, and Co. 1904. Pp. 511. Price 15*s.* net.

THE first edition of this book, which appeared in 1897, was chiefly made up of the history of military surgery *plus* the theories, probabilities, and possibilities as to the nature and treatment of wounds in future wars with modern projectiles. It was the teaching of the Netley School, the theories as to the treatment being, of course, based on ordinary modern surgical procedure. At the time of its issue antiseptic methods had never been given a fair chance of showing what they could do towards the reduction of death-rates and the preservation of limbs. Surgeons felt certain that conservative treatment would be warranted to a greater extent than had been possible in olden days and that the mortality amongst the wounded who reached the field hospitals would be much diminished; in these respects their anticipations have been realised.

The new edition has evidently been prepared with very great care. It is a book of facts and evidence as to the nature of, and treatment indicated for, wounds derived from the experiences gained chiefly in the Boer war but also from the surgical knowledge of the Spanish-American war. In it are incorporated not only the lessons and practical experience gained by the writer in South Africa and the knowledge gained by the use of the official surgical records of the late war but also the experiences of the many experienced surgeons who went to the seat of war and from whose writings the author quotes important facts and opinions. The difficulties as well as the advantages of antiseptic methods on active service as shown by actual experience in the field are pointed out. Surgeon-General Stevenson shows that wounds of almost any region of the body were less fatal in the two late wars than they were in previous ones, though in certain instances the reduction in mortality was not very pronounced. Gunshot injuries of the spine are probably those the death-rate of which has been least affected by modern changes. This is due to the circumstance that antiseptic methods cannot do as much for them as they can for other wounds and because small-bore bullets are capable of producing peculiarly dangerous lesions of the cord. There seems to be a general impression in the profession in this country that penetrating gunshot wounds of the abdomen were not nearly so fatal in the Boer war as they were in former times. The author says he believes that some reduction will be found to have occurred in the mortality but that the question can only be decided by the full statistics of the campaign, which are, of course, not yet available. He writes that wounds of the skull, of the chest, and of the long bones and joints will certainly be proved to have been much less fatal. It was predicted by some authorities before the Boer war that the percentage of casualties in future campaigns would

be enormously increased in consequence of the much greater rapidity of rifle fire possible with the new weapons and of their increased accuracy and range. But it was not perceived that the use of the modern rifle would necessitate changes in the methods of fighting; that battles would for the most part be fought at long ranges by men in "open formation" taking advantage of every particle of "cover" available. The whole English army in the Boer war lost only 7·1 per cent. in killed and wounded—less than half the total casualties of the army which landed in the Crimea. It was also anticipated that the numbers killed outright by the new rifle would be larger than in previous campaigns but the ratio is slightly lower. A chapter of 20 pages on the x rays has been added to this edition and Dr. J. Mackenzie Davidson has written the section on localisation and stereoscopic skiagraphy, matters with which he is especially conversant. Surgeon-General Stevenson says that a field hospital is not a suitable place for the use of x ray apparatus and that a coil giving a spark of from 10 to 12 inches is the least which can be relied on for all cases.

In writing of wounds of the abdomen the author says that "the majority of surgeons formerly held strongly to the view that diagnosis of mere penetration of the abdomen justified immediate operation, on the grounds that the passage of a bullet through the abdominal cavity was practically certain to cause injuries to its contents, which could only be treated by means of a laparotomy, and which, when not so treated, proved fatal in the vast majority of cases..... but the practical experience of the Boer war, and of the Spanish-American war too, has demonstrated that this position must be abandoned, at all events under such conditions as obtained in South Africa and in Cuba, where operations were as unsuccessful as they were in our own late war."

The new edition is larger than the previous one, the number of pages added amounting to little short of 100. The general arrangement stands as it did in the first issue: part of the growth of the volume is due to a more extended consideration of wounds of the chest and abdomen and part to the chapter on traumatic aneurysm, arterio-venous communications, and injuries to peripheral nerves, to the chapter on the x rays, and to the section on the casualties in the two late wars. The author's meaning is always clear though his sentences sometimes appear laboured owing to a redundancy of words, and there is some repetition, though less than in the first edition. But there can be no doubt as to the value of the volume which has been produced. It is the evidence of very solid work and has necessitated immense labour in the course of its preparation. It will certainly meet with a similar welcome to that which was accorded to the first edition not only in this country but also by transatlantic military surgeons, and Surgeon-General Stevenson is to be congratulated on its completion. He says that on occasions he has been asked "What is military surgery?" His answer is, "Surgery in war," and that while the pathology and symptoms of injuries are, of course, the same in military surgery as in the surgery of civil life and the indications for treatment are the same in both cases, it is certain that the treatment which would be indicated and accurately followed in civil practice often cannot be carried out on active service. The surroundings of the wounded in war are such that the ideal procedures usual in civil hospitals cannot be carried out on the field. The injuries met with in hospitals on a campaign differ widely from those usually seen in a civil hospital and these differences require study and experience in order that they may be recognised and that the cases may receive proper treatment. These points being taken for granted, it must be admitted that the peculiarities of gunshot wounds and the circumstances which govern their treatment must be learned by study and experience and may very properly be referred to as "military surgery."

The whole "get up" of the book could not well be improved. The print and the illustrations are good and clear, the new illustrations being for the most part reproductions of skiagraphs taken by officers of the Royal Army Medical Corps or by experts who were sent out to South Africa for this work.

The Elements of Chemistry. By M. M. PATTISON MUIR, M.A., Fellow and Prælector in Chemistry of Gonville and Caius College, Cambridge. London: J. and A. Churchill. 1904. Pp. 554. Price 10*s.* 6*d.*

IN this volume Mr. Pattison Muir has provided an excellent outline of chemical study for the beginner. He evidently assumes that the reader has little or no knowledge of the science and in the first chapter we find an explanation of some simple facts. In the main the work deals with generalisations, principles, and theories with just a sprinkling of facts which are helpful to illustrate the system. The reader is thus not burdened with a formidable array of facts connoting the properties of a long list of substances. At the same time the facts that are dealt with generally relate to more or less familiar phenomena. He thus avoids teaching theory before facts and, on the other hand, wearying the reader with a number of simple facts before he has acquired some knowledge of principles. In our opinion this is the scientific method of introducing the study of chemistry to the student. Having mastered this introduction, which will give him a very sound notion of classification and principles, he can then proceed to consider the almost overwhelming number of compounds known to chemistry and to view them in the light of his knowledge of foundations. In spite of recent investigations which have brought to light such an astounding property as that possessed by radium the whole plan or generalisation of chemistry remains the same and always will. We may have to alter our notion of the atom or of the atomic theory but the relative amounts of elements entering into reactions of compounds have been established once for all.

In an interesting but, as we think, an all too short historical chapter Mr. Pattison Muir discusses the discovery of argon, helium, and other gases which exist in the atmosphere and which are peculiar in possessing apparently an inaptitude for forming compounds. It is surprising that the author has not taken the opportunity offered to him in this chapter of referring to the researches of Madame Curie. In fact, radium is not mentioned in the book at all. Since the discovery of this substance has led to so much speculation in regard to our conceptions of the constitution of matter this omission is difficult to understand. The author states in his preface that he has omitted vast quantities of chemical facts of great importance, but surely in the discussion of principles and theories radium ought to have found a place. The preface dates from Cambridge, 1904, and the discovery of radium and of radio-emanations can scarcely now be called recent. Mr. Pattison Muir has added another contribution to his classical works on chemistry.

LIBRARY TABLE.

The Zoological Record for 1902. Part XVIII., Protozoa. By H. M. WOODCOCK. London: Printed for the Zoological Society of London. Pp. 87. Price 2*s.*—The activity of zoologists all over the world and the rapidity of their continued publication of results may be gauged by the excerpt from the *Zoological Record*, Vol. XXXIX., before us. Mr. Woodcock, to whom the duty of recording the protozoa has been entrusted, records no

less than 455 titles of memoirs published during the year, which list must be slightly reduced by a few papers that have escaped the attention of the recorders for previous years and which are incorporated in the present report. These titles, notes on some of the more important of them, and a list of new species and genera, and the like, occupy 87 pages of closely printed matter. It is not to be wondered at that the zoologist of to-day is compelled to be more or less of a specialist and to confine his attention to at most very few groups of the animal kingdom. But with a guide like the present at hand for reference progress may be made through the mass of literature accumulating with such rapidity day by day. We feel rather more sympathy with the labours of the recorder of this group of animals than for those who have devoted their attention to other groups. For while the latter have only to search through journals devoted to zoology and the publications of learned societies Mr. Woodcock has had in addition to ransack all the medical journals which, as the readers of THE LANCET know well, are by no means insignificant in number. It is easier, therefore, to excuse the chief fault in this record—viz., its somewhat belated appearance. That, however, is perhaps hardly to be avoided altogether but we would venture to urge upon the Zoological Record Committee of the Zoological Society the need of keeping a careful watch upon the flight of time in the preparation of this and the other sections of the volume, the usefulness of which is to a not inconsiderable extent commensurate with the promptness of its appearance.

Sketches of the Lives and Work of the Honorary Medical Staff of the Manchester Infirmary from its Foundation in 1752 to 1830, when it became the Royal Infirmary. By EDWARD MANSFIELD BROCKBANK, M.D. Vict., M.R.C.P. Lond. Manchester: The University Press. 1904. Pp. 311. Price 15*s.* net.—This volume, a publication of the University of Manchester, is produced in a sumptuous manner. The work began, the author tells us, with the publication of a short paper on the early teaching of medical students in Manchester; interest in the subject, however, widened his inquiries and led to the collection of notes which he publishes in this volume at the request of many friends. The book contains 55 biographical notices and appendices giving lists of the honorary physicians and surgeons from 1752 to 1830 and of the residents and matrons of the infirmary between the same dates. The book is illustrated with views of the Manchester Infirmary taken at the following dates, in 1756, in 1782, in 1792, and in 1826, with a view of Charles White's house in King-street and with 23 portraits of the most eminent of the staff in days gone by. Dr. Brockbank writes that he is aware how scrappy many of the notes are but he offers all that he knows for the benefit of others who may do better work. We think the author is too modest in making this remark. Many of the biographies are complete portraits and all are carefully and graphically written. He gives full references in the text to his sources of information. In writing of Dr. P. M. Roget, however, he might have referred to the article in the Dictionary of National Biography which is not mentioned in the "references." The book is a fine record of the work of Manchester medical worthies and is a credit both to the author and to the publishers.

JOURNALS AND MAGAZINES.

The Medical Magazine.—The May number of this magazine contains the first instalment of an article by Dr. Leonard G. Guthrie which is well worth reading. Dr. Guthrie's subject is the Medical History of John Evelyn and of his Time, and as that time embraced the great renaissance of natural science, the lives of such men as Harvey, Sydenham, Wharton, Highmore, and Willis, and the foundation of the Royal Society, it may be easily imagined that there is ample scope for an inquiring and enthusiastic medical historian. Dr. Guthrie makes good use of his material and we recommend a perusal of the article to all medical men.

The Practitioner.—The June number of this journal contains several valuable articles. Dr. F. M. Sandwith writes a comprehensive little summary of the many-named disorder most familiarly known as Malta fever; Dr. Robert Hutchison is interesting, practical, and always to the point in his consideration of the dietetic treatment of diabetes; and Mr. E. M. Corner and Mr. H. A. T. Fairbank provide a collection of the known cases of sarcomata of the alimentary canal apropos of a case under their care which is given in detail. Dr. Wilfred Harris reviews recent neurological literature in an extremely clear and judiciously compressed contribution and other articles are provided by Mr. Donald J. Armour and Dr. F. J. Poynton.

British Journal of Photography. Edited by THOMAS BEDDING, F.R.P.S. London: H. Greenwood and Co. Pp. 76. Price 2*d.*—The issue of the *British Journal of Photography* of June 10th is a special number, marking the jubilee of the foundation of the journal. It contains "30 articles on the most popular and modern phases of modern photography," written and illustrated by authorities on the various subjects dealt with; those on Entomological Photomicrography, Copying, and Stereoscopic Photography may be specially mentioned. The rapid strides which photography has made during the past half century are clearly indicated in an article by Mr. E. W. Foxlee on Photography 50 Years Ago. Says the author, speaking of cameras in 1840, "the favourite size with amateurs at that date was 10 × 8, as enlarging from small negatives was not then in vogue. 'Snap shotting' was not even dreamt of then. There were no light bellows cameras then as now, they were mostly of the sliding-box form and the dark slides were often packed inside, and the tail board was hinged so as to fold up to protect the focussing screen. I once had a field camera of this size; ..... the affair weighed about as much as a solid cube of mahogany the same size would do." Among the illustrations is a reproduction of a photograph of Sir William Crookes, F.R.S. Both those who use photography in their daily calling and those who look upon the art as a hobby will find many useful hints in the varied contents of this jubilee number.

New Inventions.

A NEW FORCEPS FOR THE REMOVAL OF STITCHES.

THE advantages of an unirritating permanent suture such as silkworm gut are manifest and well known, but it has the defects of its qualities and its removal is sometimes attended by difficulties. For instance, it is often desirable to leave the wound with the stitches undisturbed for a week, or even more, without dressing, but when at length it becomes necessary to remove the sutures they are found imbedded in dried discharge and epidermis, and when the free end of a stitch is picked up with a pair of forceps its smoothness and stiffness cause it to slip out of the grasp of the instrument. Attempts to pick up the stitch in order to divide it with

scissors often cause abrasion of the newly formed scar, or separation of the edges of the wound and objectionable bleeding. To overcome these difficulties I have had the forceps made which is shown in the accompanying figure. It will be seen that the ends of the blades, instead of the usual serrations or "mouse teeth," are modified as follows. The one has a fine, blunt-ended prong and the other a hole

through which the prong passes when the blades are pressed together. In use the forceps is lightly held with the blades apart and the prong is then inserted along the line of the wound under a stitch. The blades are then pressed together and the stitch is thus held in a grip from which it cannot escape and it can now be raised up from the wound so as to facilitate its division by scissors, after which the stitch still held by the forceps is withdrawn in the usual way. It is important that the blades should be made to spring wide asunder so that the fenestrated blade shall not impinge upon the skin and so hinder the insertion of the prong.

Messrs. Down Brothers, Limited, of 21, St. Thomas's-street, London, S.E., who are the makers of the forceps, have very carefully carried out my directions.

E. MUIRHEAD LITTLE, F.R.C.S. Eng.,
Surgeon to the National Orthopædic Hospital, London.
Seymour-street, W.

BROMPTON HOSPITAL: SANATORIUM AND CONVALESCENT HOME, HEATHERSIDE.

THE Hospital for Consumption and Diseases of the Chest, Brompton, is now provided with a sanatorium and convalescent home pleasantly situated on the Chobham Ridges of Surrey, 400 feet above sea level, about 30 miles from London, two miles from Frimley railway station, and three miles from Camberley. The site presents conspicuous advantages in regard to elevation, soil and shelter, water supply, and accessibility. The cost of the land and of erecting and furnishing the buildings will absorb some £70,000 of the invested funds of the hospital and the estimated outlay for the maintenance of the sanatorium is put down at about £10,000 per annum. The committee of the hospital trusts that the charitable public will become governors and subscribers to the hospital and thus provide for the increased annual expenditure. The Prince and Princess of Wales have kindly consented formally to open the sanatorium on June 25th and a preliminary inspection was accorded to a small party of friends and others interested in the development of the principle of the open-air treatment of tuberculosis which took place on June 20th under the guidance of Dr. P. Horton-Smith and the architect, Mr. Edwin T. Hall.

The sanatorium grounds are spacious and excellent shelter is provided from the north and east winds by pine woods affording grateful shade in summer while at the same time being free from damp. The soil is gravel and sand and belongs to the Upper Bagshot series with a reputation for dryness. The climate is described as dry, sunny, and of a bracing character. The sanatorium itself is planned on a novel and original design consisting of several buildings. A two-storeyed block of stellate form rising into three storeys in the centre is for the reception of 100 patients. The central part includes the board and day rooms and some of the larger wards, while the four radial pavilions contain the majority of the wards which are principally single-bedded. These face directly south or partially so and are arranged in such a manner that no one portion of the building is shaded by another. An interesting point in connexion with these pavilions is the fact that they are cut off from the rest of the block by a corridor of fire-resisting construction with a glass roof. The wards are designed to have the windows open day and night with protection from weather and glare, and the lower storey is so planned that patients in bed can be wheeled out on to the terrace to be under the full influence of the sunshine and atmosphere. Open balconies are formed at the end of each pavilion and, in addition, large rest shelters will be erected in the sanatorium grounds. In two detached sanitary towers on either side of the central building are bathrooms and lavatories. A second group of buildings contains the two dining rooms and a large recreation room and behind these there are the kitchen and offices, whilst on either side connected by covered ways are the residence of the medical officers and the home for the nurses. At some distance from the sanatorium is the machinery block in which are the boilers and engine houses, the mortuary, and the laboratory. The lighting will be by electricity generated on the premises and the heating will be principally by hot water radiators. The water-supply is obtained from the Frimley Waterworks which are at a short distance from the sanatorium, and the drainage is connected with the Frimley main drainage scheme.

The sanatorium is well suited for the three objects which the committee of the Brompton Hospital had in view in erecting it. The first was to submit early cases of pulmonary tuberculosis to open-air treatment in a dry and bracing climate for several months with a view to obtaining arrest of the disease. The second object was to educate a large number of patients in the system of hygienic or open-air treatment, so that, having learnt these principles, they may return to their own homes and become centres of instruction to others. The third object was to provide a convalescent home for patients who had been treated in the parent institution at Brompton. A few weeks in the fine air of Heatherside under medical supervision will, it is hoped, restore such patients sufficiently to enable them to resume work. An interesting and instructive point in connexion with this development of Brompton Hospital is the fact that no payment of any kind will be required from the patients. It is sincerely to be hoped that the public-spirited efforts of the committee of the hospital will not be allowed to fail for want of the necessary financial support.

Looking Back.

FROM

THE LANCET, *SATURDAY*, June 24, 1826.

It clearly appears from the following table,[1] that there is a great disproportion between the different grades of medical men in Paris and London:—

Paris, in 1822, *with* 800,000 *inhabitants.*

Physicians	600
Surgeons	128
Apothecaries	181
	909

London. in 1822, *with* 1,200,000 *inhabitants.*

Physicians	174
Surgeons	1000
Apothecaries	2000
Chemists and druggists	300
	3474

ADULTERATION OF DRUGS.

To the Editor of THE LANCET

SIR,—As the avowed objects of "THE LANCET" are the advantage of the profession, and the good of mankind, I trust to the principles of your publication for the insertion of this letter.

Medical men are aware of many adulterations of drugs by their vendors. And as most of them are acknowledged to be of very little, and others of no importance, they are assented to by one party and practised by the other.

But there are other adulterations which are of the greatest moment, that are more dangerous, as they are of the most efficient articles in the "Materia Medica;" and still more so as they are not suspected.

I subjoin a list of the medicines, and their most common adulterations; leaving it to some of your ingenious correspondents to suggest a remedy for this very general and enormous evil to the public and to the profession.

I am, Sir, yours, &c.,
A GENERAL PRACTITIONER.

Articles adulterated.

Calomel with Sulphate of Lime; Opium with Spanish Juice; Sulphate of Quinine Starch; Iodine with Charcoal; Croton Oil with any fixed Oil; Tartarized Antimony with Super-Acetate of Potash; Epsom Salts with Glauber Salts; Magnesia with Chalk; Elaterium with the fæculent Matter of the Preparation; Blistering Plaster with Linseed Powder; Prussic Acid is a preparation of such variable quality, that a fatal dose of the acid obtained from one druggist, may be given tripled, with impunity, when purchased of another.

[1] Excerpt from review of *An Exposition of the State of the Medical Profession in the British Dominions; and of the injurious effects of the Monopoly by Usurpation of the Royal College of Physicians in London.* 8vo. pp. 375, Longman, Rees, and Co. 1826.

THE LANCET.

LONDON: SATURDAY, JUNE 25, 1904.

The Official Status of Public Health.

WITHIN the last year several of our Government departments have been weighed in the balance and one at least has been found wanting and consigned to the melting-pot. And now attention has been turned to two other Government departments—the Board of Trade and the Local Government Board, neither of which at present ranks as a first-class department in the hierarchy of Government. This has been regarded by some as an anomaly, and is so far as the Local Government Board is concerned so considered by THE LANCET, and the Chancellor of the Exchequer in the summer of 1903 appointed a committee, of which Lord JERSEY was made chairman, to consider "the position and duties of the Board of Trade and the Local Government Board and ..... whether any, and if so what, alterations should be made in the constitution and status of those offices; also whether in the interests of administrative efficiency any re-arrangement of duties between those and other Government departments is desirable." A reference of this comprehensive nature would seem to carry with it the obligation to make a searching and detailed investigation into the working of each of the important offices concerned. But the members of the committee did not take this view and, as if anxious to be rid of the business, they elected to assume that the reference applied "primarily to the constitution of the departments as exemplified by the position of their political chiefs." As the result of this limited conception of its duty to the public the committee has presented a report which in our view will become historical by virtue of its incomplete and imperfect character. Had one of the medical inspectors of the Local Government Board been given the reference and had he sent in the report in question there would, we imagine, have been a vacancy in the department. As the sum total of its labours, the committee in a report which covers less than four pages, inclusive of the preamble, recommends that the President of the Board of Trade should receive £5000 per annum instead of £2000 and that he should become in effect a Secretary of State, while with regard to Mr. WALTER LONG, the President of the Local Government Board, the recommendation is that he should receive £3000 in place of £2000 and that as regards status he should remain as he is. The committee further recommends that the Permanent Secretary and the Parliamentary Secretary in the case of each department should receive a substantial increase in their emoluments.

The reasons which have influenced the committee in leaving the central public health office practically as it is are a little difficult to understand and the members will forgive us if we question whether they themselves have quite grasped the situation. Ostensibly they have accorded to the President of the Board of Trade an additional stipend of £3000 because the constitution over which he presides "is obsolete" and they "do not recommend its continuance" and their reason for thus regarding it is that it is a Board of an amusingly heterogeneous composition. They understand, too, that the Board of Trade "never meets." But notwithstanding this it is impossible to discover from the report what changes the committee contemplates in order that the Board of Trade may become less obsolete and the only ray of light which we can throw upon the situation is that contained in Section 13 which states that "in order to indicate more clearly the functions of the Board of Trade it might be deemed desirable to give its head the title of 'Minister of Commerce and Industry.'" We regret that we can afford our readers no further information concerning the working of this new public body but we can nowhere discover the precise uniform which the head of the department of State is to wear. The report embodies the suggestion that in contrast with the Board of Trade the Local Government Board is a real Board—quite a modern institution which meets periodically in the same fashion as the new Army Board. It would, we fear, puzzle the secretary of the commission to furnish the date of the last, or of any, meeting of the Local Government "Board." Further, no change in the constitution of the Local Government Board is recommended since "it consists entirely of members of the Cabinet." It therefore comes to this: that a committee has taken nearly a year to decide that the Board of Trade and the Local Government Board are to remain practically as they are and that the staff of each of their departments, with the exception of the three most prominent officials in each, is amply recompensed for the increasing duties which the committee is apparently satisfied have been imposed upon each department within recent years.

Clearly the committee, as constituted, has no regard for public health, and it treats with scant courtesy the suggestion of Sir MICHAEL FOSTER that the duties of the Local Government Board with regard to public health should be separated from the other duties of the Board and intrusted to a distinct staff under the direction of a Parliamentary Secretary and of a Permanent Secretary for Public Health. The proposal was advocated by Sir MICHAEL FOSTER because, in his view, the staff of the medical department had not time "to look adequately ahead," but the committee has apparently satisfied itself "that the questions connected with public health which come before the Board (other than those which require the personal consideration of the President) would not be sufficiently numerous to occupy the time of an additional Parliamentary Secretary." Clearly the committee has no conception of the importance of expansion and initiative. With the question of the alleged degeneration of the masses prominently to the front; with the need for more central interference in connexion with backward local authorities and the control of our food-supplies; with diseases such as measles, whooping-cough, infantile diarrhœa, and syphilis practically untouched, this committee writes a report in which the work of the medical department is not so much as mentioned and where no reference whatever is made to that little army of exper

officers who for the last quarter of a century throughout England and Wales have brought credit to the Board and have kept it in touch with the public. We do not gather, however, that Mr. BALFOUR is disposed to treat the report at all seriously and we may therefore hope that Mr. LONG will succeed in diverting the recommendations of the committee from his own department. Certainly he knows the needs of his department far better than does this very perfunctory committee.

The Royal College of Surgeons of England: Election of Members of Council.

ON Thursday, July 7th, the Fellows of the Royal College of Surgeons of England will have an opportunity of participating in the election of three members of the Council. Under the present regulations whereby Fellows may vote through the post the act of voting is extremely simple and merely requires the writing of a few words and the cost of a 1*d.* stamp, yet so apathetic are the Fellows of the College that only 50 per cent. of them care to take the small amount of trouble needed to sign and to post the voting paper. Whether they are inclined to favour reform in the affairs of the College or are advocates of the maintenance of the *status quo* we should have imagined that they would think it worth while to endeavour by voting for suitable candidates to support the views which they hold. Be the explanation what it may the fact remains that only every other Fellow cares to vote at all. Few, indeed, vote personally; for some years past less than 20 Fellows have attended the actual election, so that the President and the scrutineers carry on their arduous labours of verifying and counting the votes in an almost empty room.

In considering the claims of the candidates for the Council (and it is often by no means easy to estimate their relative value) it should be remarked that it is almost essential that the members of that august body should have had much experience in the teaching as well as in the practice of surgery, for most of the work that the Council has to perform is connected with the teaching and the examining of students and therefore a post on the teaching staff of a medical school is almost a *sine quâ non*. But it is by no means essential that the councillor should always remain on the teaching staff; it is sufficient that he has been connected with it. There is also need that the Council should be in touch with those in practice and it would be especially advantageous if it could keep closely in touch with those in general practice. Now no small proportion of the Fellows are gentlemen who are in general practice and it would be of the greatest benefit, not only to the Council but also to the Fellows and Members of the College and to the profession at large, if some Fellow in general practice would allow himself to be nominated as a candidate for a seat on the Council. There should be no difficulty in finding a suitable Fellow and several names at once suggest themselves. Should such a candidate appear we feel sure that he would receive the support of many Fellows. It is hardly known to those outside the immediate circle of the Council how much of the work of that body is done in committee. It is in the committees and not in the Council itself that most decisions are arrived at and rare, indeed, is it for the recommendations of a special committee to be rejected. The importance and the number of the committees render it absolutely necessary that all members of the Council should bear their fair share of the burden and this is only possible if each member of the Council is willing to attend regularly the committees of which he is a member. It is not enough that a councillor should attend punctually the eleven regular meetings of the Council; he should also be willing and able to attend the committee meetings. The time required for this is very great and in the case of office-bearers, the President and the Vice-Presidents, who are *ex officio* members of all committees the time devoted to the service of the College must be enormous and in the case of a surgeon in a large practice the pecuniary sacrifice may well be very great. It is only fair that some of the representatives of the Fellows on the Council should be provincial surgeons but it is rare for a surgeon from a provincial town to be able to devote the necessary time to the numerous committee meetings. This practical impossibility of fulfilling all the duties of a councillor doubtless often prevents provincial Fellows from allowing themselves to be nominated for the Council.

At the present election there are three vacancies and one of these has been caused by the death of Mr. T. R. JESSOP of Leeds. In the Council as now constituted there are three members representing the provincial Fellows. Mr. A. W. MAYO ROBSON of Leeds, Mr. F. RICHARDSON CROSS of Bristol, and Dr. J. WARD COUSINS of Portsmouth, and as Mr. MAYO ROBSON has since his election become domiciled in London he can hardly be looked upon as a provincial Fellow. The Council contains 24 members and a sixth of the whole number, or four seats, may be reasonably said to be a fair proportion for the provincial Fellows. This number will only be reached if one of the vacant seats is filled by a provincial Fellow. There is only one provincial candidate, Mr. H. GILBERT BARLING of Birmingham. He obtained his Fellowship in 1881 and he is surgeon to the Birmingham General Hospital and professor of surgery at the University of Birmingham. From his standing Mr. BARLING should make a valuable addition to the Council and we think that he will in all probability be elected but his election will depend mainly on the votes of the provincial Fellows who can insure his success at the poll if they choose. Thus we are left with only two vacancies for six London candidates. These are, in order of seniority, Mr. C. H. GOLDING-BIRD, Mr. HARRISON CRIPPS, Mr. FREDERIC S. EVE, Mr. W. BRUCE CLARKE, Mr. A. A. BOWLBY, and Mr. J. BLAND-SUTTON. Mr. GOLDING-BIRD obtained the Fellowship in 1874. He is surgeon to Guy's Hospital and is a member of the Examining Board of the College. He has done much for surgery. Mr. CRIPPS took the Fellowship in 1875. He is surgeon to St. Bartholomew's Hospital and is well known for his work on the diseases of the rectum. Mr. EVE obtained his Fellowship in 1878. He is surgeon to the London Hospital and was formerly pathological curator at the College. Mr. BRUCE CLARKE is surgeon to St. Bartholomew's Hospital, having taken his Fellowship in 1879. He has evinced an interest in the affairs of the

College at various times. Mr. BOWLBY became a Fellow in 1881 and is also surgeon to St. Bartholomew's Hospital. He is probably best known for his useful little work on surgical pathology and his treatise on the injuries of nerves. Mr. BLAND SUTTON took the Fellowship in 1884 and is surgeon to the Middlesex Hospital. Of these six candidates three are connected with one hospital, for Mr. CRIPPS, Mr. BRUCE CLARKE, and Mr. BOWLBY are all on the staff of St. Bartholomew's Hospital. We think that it would have been well for these three candidates to have come to some agreement amongst themselves, so that at least one of them might have retired from the contest. It is now unfortunately too late, for even if a candidate wishes to withdraw he cannot do so unless he gives notice to the Secretary of the College before the last day for sending in applications.

There are 12 medical schools in London, one of which, the London School of Medicine for Women, we must leave out of consideration since its students are not admitted to the examinations of the College; 17 of the present London members of the Council are distributed among the others as follows: St. Bartholomew's Hospital has three representatives, Mr. JOHN LANGTON, Professor HOWARD MARSH, and Mr. H. T. BUTLIN. Five hospitals have two representatives each: St. Thomas's Hospital, Mr. H. H. CLUTTON and Mr. G. H. MAKINS; Guy's Hospital, Sir HENRY G. HOWSE and Mr. R CLEMENT LUCAS; University College Hospital, Mr. JOHN TWEEDY and Mr. RICKMAN J. GODLEE; the Middlesex Hospital, Mr. HENRY MORRIS and Mr. A. PEARCE GOULD; and St. Mary's Hospital, Mr. EDMUND OWEN and Mr. HERBERT W. PAGE Four hospitals have one representative each: Charing Cross Hospital, Mr. JOHN H MORGAN; King's College Hospital, Mr. W. WATSON CHEYNE; St. George's Hospital, Mr. CLINTON T. DENT; and the London Hospital, Mr. C. W. MANSELL MOULLIN. One member of the Council, Sir ALFRED COOPER, is not connected with a medical school. It will thus be seen that one London medical school, St. Bartholomew's, has already three representatives on the Council of the College and therefore it is not right that more than one fresh member of the Council should be connected with that hospital. We readily acknowledge the great importance of that medical school, but surely one-sixth of the whole Council should satisfy it, especially as one London medical school, Westminster, is not represented at all on the Council. Any one of the candidates would make a useful member of the Council but we may say that we think that Mr. GOLDING-BIRD would be one of the most valuable additions to the governing body of the College if elected. Of the three candidates from St. Bartholomew's it seems to us that either Mr. BRUCE CLARKE or Mr. BOWLBY will be likely to succeed but probably there will be some splitting of votes. Mr. EVE is, we think, more likely to be successful at a later election, though the London Hospital may not unreasonably expect to have two representatives. Mr. BLAND SUTTON, too, will doubtlessly in time attain to the Council but he can afford to wait seeing that in point of standing he is the youngest of the candidates and that his medical school, Middlesex Hospital, has already two able representatives. We may, therefore, express the opinion that the most suitable candidates for the present vacancies on the Council are Mr. BARLING, Mr. GOLDING-BIRD, and either Mr. BRUCE CLARKE or Mr. BOWLBY.

The Earlswood Asylum.

WE publish to-day a letter on the subject of the Earlswood Asylum which is well calculated to enlist the sympathy of everyone into whose hands it may fall. The tale which it unfolds is simple and discloses a condition for which the present administrators of the asylum are in no way responsible. It appears that the building was erected more than 50 years ago "in times when the supervision of local authorities was not what it is now," or, in other words, when the jerry builder was undisturbed master of the situation. No proper foundations were laid, the walls were filled in with rubbish, and the house stands upon the Wealden clay which is subsiding under its weight. The walls are cracking and yielding in all directions and a fate similar to that of the Campanile at Venice can only be averted by prompt and large expenditure. A sum of £30,000 is required to re-establish a condition of security and unless the whole of the work can be accomplished before the coming of winter a much larger outlay will be necessary next year. The asylum contains more than 500 inmates of the class for which it was intended to provide, besides a numerous staff of medical men, teachers, and attendants, and the safety of all these people would be seriously compromised by neglect of the condition which has become manifest, insomuch that if the repairs required cannot be completed without loss of time it may be necessary to close some part of the asylum. We are, however, assured that every effort will be made to avoid sending any of the patients or pupils, whichever they may be called, back to their homes. Before the lamentable discovery was made the asylum was in a state of "comparative financial security" but the board of management was compelled to grapple with the emergency without delay. It has already spent £12,000, a sum which represents all the money it can immediately command, the weekly labour bill amounts to £300, and the board is in debt to its bankers. The time which has elapsed since the building was completed renders it impossible to obtain redress either from the architect who designed the structure or from the builder who erected it, while the members of the unsuspecting committee by which these persons were employed have long since slept in the happy conviction that their work had been well done. We can almost feel thankful for their sakes that they have been spared the dismal knowledge which has been brought home to their successors.

The Earlswood Asylum is a conspicuous object by the side of the London and Brighton Railway, on which it has a small station for its service just beyond Reigate. It represents the first systematic attempt made in this country to elevate the condition of the idiot portion of the population by careful instruction and by scientific study of their capacities. The results attained have been far better than was at first anticipated and they have paved the way for that better teaching of weak-minded children which is now taking a high place among the duties of educational authorities, especially in its application to cases not sufficiently pronounced for an asylum but still backward

in comparison with any normal standard. Of the 522 inmates of Earlswood at the end of 1902, 159 males and 30 females had been successfully taught some form of industry or employment; and it is mentioned in the last report that the shoemaker's class had made 512 pairs of boots and shoes during the year and had repaired 7728 pairs. The benefits of the asylum are not limited to the poor but are extended also to paying inmates and proper cases are received from all parts of the kingdom. It is perhaps one of the difficulties against which such an institution has to contend that its very success serves to conceal the importance of its operations and that the extent to which it has gathered together idiots from many localities has to some extent induced forgetfulness of the miseries which these poor creatures once endured and of the burden which they once were to all who were in any way responsible for them. When the asylum was instituted there were few localities in which idiots were not to be found in the cottages of some of the poor, creatures sometimes dangerous, always useless and repulsive, and always calling for an amount of watchfulness which rendered them sore incumbrances to their parents. In many cases their misfortunes served to call into play the best feelings of those around them, but in some they were treated with atrocious cruelty, and it was by no means uncommon for them to be left locked up alone for hours at a time when other members of the family were absent, and locked up in cold rooms even in the depth of winter lest they should set fire to themselves or to the building in which they were confined. To much of this suffering and cruelty the Earlswood Asylum has put an end and it has also made generally accessible at least some knowledge of the methods by which children of defective intellect may be trained as completely as the nature and degree of their defects will allow.

There is only one passage in the letter which we print to-day to which we can take exception and that contains the statement that many old patients who were once worse than useless at home have returned to be breadwinners. The word, in its application to the working classes, carries with it a suggestion that those to whom it is applied are likely also to be parents and such a consummation in the case of persons who had originally been of sufficiently defective intellect to be proper inmates of an idiot asylum is one which we should regard as much to be deplored. In every other point of view we are in entire sympathy with the appeal and desire to express our cordial hope that it will call forth a prompt and liberal response from the benevolent.

Annotations.

"Ne quid nimis."

THE CONSTRUCTION OF LIFE-TABLES.

A USEFUL outline of the methods of calculating life-tables has just been published in a convenient form under the sanction of the Victoria University of Manchester. The author is Dr. T. E. Hayward and the full title of the work is 'On the Construction of Life-Tables and on their Application to a Comparison of the Mortality from Phthisis in England and Wales during the Decennia 1881-90 and 1891-1900."[1] One of the first problems which presents itself in the analysis or discussion of vital statistics, such as census returns, is the computation of the chance or probability of surviving from age x to age $x + 1$. This number is usually expressed by the letter p and is the quotient obtained when the number of the population at the end of the xth year of age is divided by the number of the population at the beginning of the xth year of age. As it would be almost impossible to supply the data in a form suitable for this purpose it becomes necessary to use a method assuming that rates of mortality at different ages, which exist *simultaneously* during a limited period of observation, will come *successively* to affect a supposed generation of individuals from birth to the end of life. In actual census returns the data practically available for calculating the p series of values are population and death numbers not given for each separate year of age but in groups of ages, and it is requisite to divide these numbers into numbers belonging to each separate year of age. This may be done either graphically by plotting a curve on squared paper or more correctly by means of arithmetical interpolations depending on the method of finite differences, the interpolation being applied either to the numbers themselves or to their logarithms—preferably the latter. The orders of differences to be employed will not usually exceed the sixth. The computations are in any case elaborate and tedious, but Dr. Hayward describes some abbreviated methods of life-table construction by which the mean expectation of life or mean after-lifetime of persons at any age x may be calculated for quinquennial or decennial intervals with an accuracy closely approximating to that obtainable by the much more laborious "extended" methods. The theory of either process, whether abbreviated or "extended," can hardly be followed except by those who have considerable familiarity with the expansion of logarithmic and exponential series, as well as with differentiation and integration, but this fact need not deter non-mathematical readers who are interested in the general subject, for the author has judiciously separated the theoretical or algebraic part from the practical or arithmetical part and has provided a sufficient number of worked-out explanatory examples. As a practical illustration of the results deducible from life-tables, he gives three tables calculated for the purpose of exhibiting a comparison of the mortality from phthisis in England and Wales during the decennia 1881-90 and 1891-1900. One of the leading points brought out by this series of comparisons is that as a result of the decrease in the mortality from phthisis during those decennia the expectation of life at birth has been increased by 0·45 year for males and by 0·68 year for females.

SKIPPING.

IT is often said that the hygienic value of an exercise depends chiefly on the number of muscles which it brings into action. If this be true, and there is at least some truth in it, skipping should be especially useful, for there are few muscles which are not caused to contract by this mode of exercise. Dr. F. T. Bond of Gloucester has recently published a second edition of a little pamphlet entitled "A Plea for the More General Practice of Skipping by Adults as well as by Children as an Unsurpassed Form of Home Gymnastics." Dr. Bond's arguments in favour of skipping are mainly these: (1) that in consequence of the large number of muscles brought into action the circulation is stimulated; and (2) that it is capable of being graduated so that it may be intelligently regulated and gradually increased as the strength increases. It is a rhythmical exercise and therefore the number of skips forms a fairly exact criterion of the amount of exercise. Dr. Bond recommends

[1] Manchester: Sherratt and Hughes. 1904. Pp. 42. Price 1s. 6d.

skipping as predisposing to sleep if indulged in shortly before retiring to bed. He further advocates it in some forms of pulmonary disease where there are imperfect expansion and aeration of the lungs, such as in cases predisposed to pulmonary tuberculosis and in chronic bronchitis. In nervous diseases also, as in chorea and hysteria, he considers it useful. In some forms of heart disease also he thinks it may prove of value but obviously the greatest care would have to be taken in employing it in such cases. It is a fact that some trainers have a high opinion of skipping as an adjuvant in the training of athletes and it has certainly been unduly neglected by the public. Probably the chief thing that has militated against the more extensive employment of skipping is the loss of dignity which it necessitates but this is a very small objection, for it can be indulged in in the privacy of the bedroom, provided always that the floor joists are of suitable strength. The practice of skipping enables a skilled performer to alight with the utmost gentleness, so as not to disturb the safety even of a modern jerry-built dwelling. One great argument in favour of skipping is the cheapness of the instrument required. A few yards of rope will suffice but for those who desire a more scientific and ornate skipping rope the Sanitary and Economic Association (of Gloucester) has devised an appliance called a "Girbola," which is a kind of glorified skipping rope, the weight of which makes it easier to skip with. Employed intelligently skipping cannot fail to prove useful to many who cannot conveniently indulge in other more interesting modes of exercise.

AN UNUSUAL CASE OF CONGENITAL HEART DISEASE.

IN the *Münchener Medicinische Wochenschrift*, No. 18, 1904, Dr. H. Ebbinghaus records an interesting case of congenital heart lesion observed by him in the German Hospital in London. The patient was a man, aged 52 years, who was admitted to the hospital with left hemiplegia, having fallen unconscious in the street. On arrival at the hospital he had partially regained consciousness but shortly after he became comatose, his limbs later presented a peculiar rigidity, and he died in ten hours from the commencement of the seizure. A hæmorrhage into the right basal ganglia with rupture into the lateral ventricle was diagnosed and this proved to be correct. The man's previous history obtained from his friends was of some interest. He was a man of very large stature and came from a healthy family and had been employed for some seven or eight years as a window-cleaner. He was regarded by his relatives as having "a weak heart" which had been attributed by a medical practitioner to an attack of acute rheumatism 28 years before. 14 years before his fatal attack he suffered from a "stroke" in which there was no loss of consciousness but severe bleeding from his mouth and nose occurred. Two years later the patient suffered from typical right hemiplegia with aphasia, from which he appears to have recovered completely. There was no history of alcoholism or of syphilis and his only complaint seems to have been very frequent bleeding from the nose which was an almost daily occurrence at meal times. At the necropsy a large hæmorrhage was found in the right basal ganglia and an old apoplectic cicatrix in the left lenticular nucleus. There was typical chronic venous congestion of the spleen and liver, while the gall-bladder was tightly packed with gall-stones. The kidneys were natural and there was no congestion of the intestinal vessels. The lungs presented a slight degree of emphysema. There was some degree of arterio-sclerosis of the first part of the aorta and of the coronary arteries but there were no macroscopic changes in the cerebral vessels. The heart was three times larger than normal; there were a few milk-white patches but no pericardial adhesions. There were general dilatation and hypertrophy of both auricles and ventricles but especially of the right ventricle, the walls of which were very thick. The auriculo-ventricular and semilunar valves, apart from slight sclerotic changes, were natural. The ductus Botalli was closed. The septum between the auricles was of membranous texture with 15 perforations; two of them were nearly an inch in diameter, the posterior one being partly closed by a perforated membrane. Further, there was in the right auricle an extensive fine network stretching from the upper margin of the Eustachian valve to the region between the two caval orifices, with a few fine fibres extending to the interauricular septum. Dr. Ebbinghaus discusses these malformations from the embryological standpoint after giving a *résumé* of the development of the inter-auricular septum from the septum primum and septum secundum and describing the nature of the ostium primum and the ostium secundum or foramen ovale. He regards the membranous wall in his case as the septum primum, the septum secundum being absent, the two large orifices being respectively the ostium primum and the ostium secundum. The other perforations he explains by a reference to similar conditions found in the embryonic state of certain birds, monotremes, and marsupials. The peculiar network described is a great rarity. It was first carefully described by Professor Chiari in 1897 and is sometimes referred to as Chiari's network, although it had been observed by Rokitansky. The network is to be regarded as the remains of embryonic valves—viz., the valves of the right venous sinus or the septum spurium. They might be expected to lead to intracardiac thrombosis and in two cases this complication has been observed. In this case, however, they seem to have been without any pathological effect. The interest of this case, apart from its rarity, consists in the combination of defect or arrest of development with a persistence of temporary structures and the extraordinarily complete compensation for the defect so that the patient lived to the unusual age (in the circumstances) of 52 years. A few cases of multiple perforation of the septum (interauricular) are on record but this is probably the first case of Chiari's network observed in this country.

THE SUPPLY OF ICE FOR DOMESTIC USE.

IN an annotation in THE LANCET of May 28th, p. 1521, under the above heading we pointed out that the supply of pure ice in this country for domestic purposes is not so abundant or available as it should be. This article has received the attention of the editor of the *Cold Storage and Ice Trades Review* and in the issue of this journal of June 15th the views which we expressed are very generally endorsed. Further, it is interesting to learn from this authority that the main reasons why more ice is not consumed in this country are an unreasoning prejudice against its use which only education can overcome, the initial cost of the ice safe and of the ice to the consumer (although that is soon repaid by the saving of food which otherwise would be wasted), and the difficulty in many places of obtaining small supplies regularly. These views of the position coming from such an unquestionable authority deserve consideration. There ought not to be, it seems to us, any great difficulty in meeting the reasons which are urged as to why ice is not more generally consumed or employed at least for cooling and preserving purposes. Such reasons, at any rate, do not hold in Germany or America where there are facilities for obtaining ice abundantly and cheaply. It can hardly be imagined that people need to be educated with regard to the advantages of a supply of ice for domestic purposes not only in the hot weeks of the summer but during the whole year. Education, perhaps, might be useful

in bringing the public to appreciate more keenly the value of ice for the preservation of food. If it were only realised that by having a plentiful supply of ice at hand perishable articles of food can be preserved in a fresh and wholesome state many a householder would be led to make use of it and thus would effect a domestic economy which would render all consideration of expense as to ice safes and ice itself negligible. We still maintain that the public would use ice much more freely if it could be obtained more conveniently, more abundantly, and at a reasonable price. We are not familiar with the way in which ice is distributed for domestic supply or retailed to the householder in the United States of America but it seems clear that a more satisfactory agency of supply than is provided in the fishmonger is wanted. Our contemporary suggests the milkman who goes on his round two or three times daily and who could probably push the sale of ice at the same time. The suggestion is, we think, an admirable one and the milkman, moreover, who added to his business that of dealing in ice might be less tempted to use borax to keep his milk sound and sweet. On the other hand, the temptation might be irresistible to put a little ice into the milk which, though a satisfactory proceeding enough for preserving purposes, would give him an ingenious excuse for watering the milk. Some new plan, at any rate, is wanted which will secure for the public a more satisfactory supply of ice than is at present the case. We are sure that everybody appreciates the increased refreshing quality given to certain beverages when kept well below summer heat by the application of ice. How much better, too, is butter when cooled on ice. We are aware that to initiate an abundant supply of ice for domestic purposes would be a bold experiment from a financial point of view but in the end we believe that the public would appreciate what a real boon is a pure, cheap, abundant, and available supply of ice for domestic purposes and that the enterprise would ultimately succeed. The chief point to impress upon the public is that by the use of ice in warm weather much valuable food that is otherwise wasted would be saved because by keeping it in contact with, or in the vicinity of, ice it would be kept sweet and wholesome for a considerable time. The question is thus of importance from the point of view of public health.

"BREAD-AND-BUTTER."

MANY of us have, doubtless, when partaking of a humble repast of bread-and-butter at some wayside inn had a shrewd suspicion that the fat which was spread upon the bread had never passed the udder of the cow, but it has been reserved for the medical officer of health of the City of London to reveal to us the frauds which are practised under the wholesome name of "bread-and-butter." It appears that what Dr. William Collingridge terms a "particularly mean fraud" has been largely practised in the past by the proprietors of small eating and coffee houses, and it was found by the public analyst that a large proportion—i.e., from 26 to 76 per cent.—of the 71 slices of "bread-and-butter" which were purchased at these places consisted of "bread-and-margarine." Convictions were obtained in five instances and as a result the London Coffee Restaurant and Dining-Room Keepers Trade Protection Society has taken up the matter. The society points out that in consequence of these convictions it is necessary that butter should be supplied when butter is asked for and it draws attention to the rule of the society that the funds shall not be used in defending any member who shall knowingly act in contravention of the law. It is further suggested that a warranty shall be procured with every sample of butter and that those members of the society who prefer to use margarine should exhibit a notice to the effect that no butter is used at the establishment but that the finest margarine is used for slices of bread and for haddock. We expect that Dr. Collingridge may soon wish to know what is the *finest* margarine. We hope that other local sanitary authorities will take up this subject and that sooner rather than later the time will come when the purchaser will get what he asks for. But the legislative machine needs oiling and even a simple and non-contentious subject such as the regulation of the preservation and colouration of foods clogs its wheels. If the House of Commons could sit on one day to deal with contentious Bills and on another to deal with non-contentious Bills we might see some progress with the numerous Bills of the latter class which are in effect simply waiting to be read and to be accepted cheerfully by the people.

AMAUROTIC FAMILY IDIOCY.

AN interesting account of this rare affection is given by Dr. Ernest Sachs in the *Johns Hopkins Hospital Bulletin* for March. The rarity of the condition may be judged from the statement that it was the first case of its kind observed at the Johns Hopkins Hospital since it was opened some years ago. A brief account of the earlier observations and features of amaurotic family idiocy was given in THE LANCET last year.[1] The present case was that of a child, aged 14 months, in whom the diagnosis was made on the ground of the general mental condition of idiocy combined with the typical degenerative changes in and around the macular region of the retina which constitute the amaurotic type of idiocy. The family history was good since both parents were healthy and free from either symptoms or a previous history of syphilis. Both the parents were Russian Jews and according to Dr. Bernard Sachs, who was one of the first to give a fairly complete clinical and pathological account of the disease, Jews show a special proclivity towards this particular form of blindness and cerebral defect. Two other children of the same parents were healthy and free from neurotic affections but one of them recently died from diphtheria, a fact which seems to throw no light on the present case. There was no history of amaurotic family idiocy in the father's or the mother's family, so that the illness of the child could not be regarded as due to inheritance. The patient was a full-term child, healthy and free from convulsions, and with no symptoms pointing to syphilis. He contracted bronchitis at the age of six weeks and had coughed ever since. At the age of one year he suffered from an attack of measles, since which date he had ceased to exhibit any of the normal mental development of children; he had never spoken or walked or crawled. The bowels were always constipated. "Physical examination showed," says Dr. Sachs, "a sickly-looking child with expressionless face, blind, noticing nothing and following nothing with the eyes, but able to hear." The child started violently at a sudden sound. There was some stiffness of the arms on passive movement but no contracture. The deep reflexes were exaggerated in the arms and the legs. There was no ankle-clonus. The toes responded with flexion on plantar stimulation. There was no paralysis or local muscular atrophy of any part of the body and cutaneous sensation was everywhere present. Ophthalmoscopic examination showed degenerative pale patches in the macula lutea surrounded by grey areas in the red zone outside the macula, while the optic discs were pale. Vision was quite absent in both eyes. The patient's weakness increased, dysphagia and emaciation set in, and contractures gradually developed in the arms and legs. "On several occasions the child had attacks of explosive laughter," says Dr. Sachs, "which seemed to come without any apparent outside

[1] THE LANCET, May 9th, 1903, p. 1294.

stimulus." The patient died after a short sojourn in hospital. "The case is undoubtedly one of amaurotic family idiocy," concludes Dr. Sachs. It showed all the cardinal symptoms of the condition, as well as two particular symptoms recorded in a few cases by Falkenstein—viz., "explosive laughter" and dysphagia or disturbance of deglutition before emaciation set in. Though the frequency of the affection in, and indeed its almost exclusive limitation to, the Jewish race has been noted by various writers no explanation is as yet given of this curious phenomenon.

THE MENTAL SYMPTOMS ASSOCIATED WITH PERNICIOUS ANÆMIA.

THE bulbo-spinal lesions and symptoms of pernicious anæmia have, through the work of Lichtheim, Burr, and others, become well-known but in recent years the view that the toxæmia of pernicious anæmia plays the most important rôle in producing degenerations of the spinal cord has been gaining ground and attention has been more fully given to the effect on the brain of this disease. Mental symptoms of the character of mild delirium and subacute mental confusion were early recognised by a few writers of eminence. "The mind occasionally wanders in delirium or confusion," said Addison in his classical portrayal of idiopathic anæmia. In the *American Journal of the Medical Sciences* for June Dr. William Pickett of Jefferson Medical College gives an account of his studies on cases of pernicious anæmia and from personal observations (16 cases) and the records of literature attempts to give a rational pathology of the mental disturbances produced. The recorded cases from literature are mainly those of Henry Marcus, a Swedish physician (1903), and of Dr. Capp (1898) and Dr. Jelliffe, both of the United States. In the cases recorded by Marcus the delirium accompanying cases of pernicious anæmia was of an expansive character, like a mild form of the megalomania of general paralysis. The red corpuscles of the blood were reduced to one-half and the hæmoglobin to one-fourth of their normal amounts. "The mental symptoms subsided in the course of six months under treatment and had not returned two years later, which, I think, is strong support for Marcus's claim that this [special delirium] was a true pernicious anæmia psychosis," adds Dr. Pickett. Secondary anæmias with moderate leucocytosis are found in association with cerebral and spinal cord disorders, especially general paralysis. In seven cases specially examined by Dr Pickett of general paralysis with spinal symptoms marked anæmia was present. Adding to these 19 cases recorded by Dr. Capp and 18 by Dr. Jelliffe a total is reached of 44 cases of this particular type of general paralysis (where the spinal cord is affected) in which profound anæmia occurs together with leucocytosis. When the general paralysis is exclusively of the cerebral type, adds Dr. Pickett, the anæmia and leucocytosis are not so intense. Diffuse degeneration and tract degenerations of the cord have been met with in various cases of pernicious anæmia, but of the cerebral lesions (if any) which might be present but little has been hitherto known. From a study of two cases of pernicious anæmia which recently ended fatally Dr. Pickett finds that cerebral changes of an important and characteristic kind are present. These patients, as well as five others still alive though suffering also from pernicious anæmia, were carefully studied with regard to their mental and nervous symptoms. Among the manifold disturbances observed the following were the more marked and constant. (A brief epitome of each case is given.) The first case, that of a male, was marked by delusions that his wife was unfaithful and that he was being poisoned by "noxious gases." He believed that "exudations of poison" issued from his hand. The second patient, a woman, had mild dementia through the course of the disease but during exacerbations of the anæmia a series of attacks of mental confusion and dream-like delirium was observed. The third patient was a woman who through the course of her illness suffered from mild attacks of delirium and mental confusion. The fourth case was that of a man with pernicious anæmia who was very pale and had long periods of mental confusion when the anæmia deepened. The fifth case was that of a woman with physical and mental symptoms very similar to those of Case 2. "A composite picture of the mental disturbance in these cases," says Dr. Pickett, "presents a shallow [mental] confusion with impairment of ideas of time and space (disorientation), more marked on awaking from sleep. The patient fabricates stories, relating imaginary experiences of yesterday in a circumstantial way. Illusions of identity [of persons] are common. Hallucinations of the senses also occur and based upon the illusions and hallucinations persecutory delusions may arise." The hallucinations and delusions are of transitory character, cause reactions of fear and agitation in the patient, and recur from time to time over considerable periods. The psychosis of pernicious anæmia is mainly an abeyance of higher mental action with a basis of mental confusion or delirium varied by transitory attacks of excitement. It is, says Dr. Pickett, allied in some respects with the psychoses of Korsakoff's disease and of Bright's disease.

THE ELECTROLYTIC METHOD FOR THE DETECTION AND ESTIMATION OF MINUTE QUANTITIES OF ARSENIC.

OWING to the difficulty of obtaining zinc absolutely free from arsenic for use in the hydrogen generator in the Marsh-Berzelius method Lord Kelvin suggested some time ago that an electrolytic method of liberating hydrogen might be devised which would remove this difficulty. Eventually a committee appointed by the Commissioners of the Inland Revenue decided on the electrolytic method and it devised an ingenious apparatus which was described in THE LANCET of May 23rd, 1903, p. 1469, the apparatus being exhibited by Dr. T. E. Thorpe at a conversazione of the Royal Society in 1903. Recently Mr. William Thompson, F.I.C., has contributed to the memoirs and proceedings of the Manchester Literary and Philosophical Society a paper upon an interesting series of tests in which the electrolytic apparatus was tried and the results were compared with the Marsh-Berzelius apparatus. It was found that it was impossible to get arsenical mirrors by the committee's electrolytic apparatus when using arsenic in quantities less than $\frac{1}{10}$th of a grain of arsenious acid per gallon, employing 50 cubic centimetres of liquid in the apparatus. The use of other metals than platinum as cathode proved unsatisfactory with the exception of pure granulated zinc. When a piece of granulated zinc was attached to the platinum wire, so that the zinc constituted the cathode, stronger mirrors were obtained for the different quantities of arsenic than were given by the platinum cathode apparatus, but with $\frac{1}{1000}$th of a grain of arsenic the result was not equal to the standard produced in the Marsh-Berzelius method of testing. Ultimately a rod of pure zinc was employed as cathode and then it was found that the electrolytic method was as delicate as the Marsh-Berzelius process for the detection and estimation of most minute quantities of arsenic. The suggestion was made by the committee that in the case of testing beer frothing could be prevented by the addition of amyl alcohol without interfering with the results, but Mr. Thompson's experiments show that the delicacy of the test is considerably reduced by

the use of amyl alcohol. Small quantities of invert sugar, however, do not appear to make any serious difference. Mr. Thompson finds, in conclusion, that by using 25 cubic centimetres of beer as recommended by the committee and completely destroying the organic matter a very faint mirror is produced when $\frac{1}{100}$th of a grain of arsenic per gallon is present, but when the beer is used direct with amyl alcohol no mirror at all is produced and therefore this direct method would appear to fail to detect an amount decidedly greater than that which the committee regards as sufficient to condemn the sample. These results are therefore of obvious importance. The classic Marsh-Berzelius result seems after all to be the most delicate process but then the greatest care must be taken to insure that the zinc employed is absolutely free from arsenic.

SAFETY IN THE NOISE OF THE MOTOR CAR.

THE opinion is very commonly expressed that a decided improvement in motor vehicles would be gained if the noise of the motor could be reduced or suppressed altogether. The enormous number of small explosions which take place in the engine of the motor car or bicycle create a noise which is undoubtedly at all times offensive to the ear but which is far worse when the chauffeur or rider is not a master of his engine, for then the explosions are often irregular. Rhythm makes even the noise of a motor less disagreeable to the ear than an ill-timed succession of reports. It is debateable, however, whether, after all, it would be desirable to reduce the present loudly palpitating machine to an absolutely noiseless vehicle. The noise of the engine in the present motor gives ample warning of its approach on the road, a warning which, considering the comparatively high speed oftentimes attained by the car, might be sounded by the horn too late. It is common on the highways to find coachmen who are driving restive horses on the alert long before the car comes up to them, warned by the distant sound of the regular beating of the engines. A motor car proceeding, say, at 20 miles an hour in perfect silence would almost be certain to be a source of terror and disaster. Even in the case of the ordinary bicycle there is danger in its silence of action and when the noiseless rubber-tyres first came upon the scene a continuously jingling bell accompanied them. In the same way other rubber-tyred vehicles carry a similar signal, although the clatter of the horses' hoofs upon the road conveys some sort of warning. We doubt whether a bell continuously ringing on a motor car or bicycle can ever be as effective or timely a warning as the penetrating beat of the motor engine. The shrieking whistle of an express train is often too late to enable danger to be avoided and it is appalling to think what would happen if an express were designed which could travel at the rate of 60 miles an hour without the slightest warning noise being given by its wheels rotating or by its intermittent escape of steam. The same holds good for motor vehicles and though as it is they add to the dangers of locomotion on our roads these dangers would be considerably accentuated if it were not for the perpetual and penetrating beat of the engine.

THE INCORPORATED SOCIETY OF MEDICAL OFFICERS OF HEALTH.

THE provincial meeting of this society will be held in the town hall, Newcastle-upon-Tyne, on Saturday, July 2nd, at 11 A.M., under the presidency of Dr. Joseph Groves. Visitors, either ladies or gentlemen, are invited to be present at the general meeting of the society and at the subsequent luncheon and excursions. There will be seven candidates proposed for election as Fellows and two for election as Associates. Dr. John J. Boyd, medical officer of health of the county borough of South Shields, will read a paper on the Incidence of Scarlet Fever in Different Districts of the Same Town. Those who desire an advance proof of Dr. Boyd's paper should send a stamped and addressed envelope to the honorary secretaries before June 29th. At 2 P.M. a party will proceed by train from the Central Railway Station to the Newcastle Isolation Hospital, where Mr. H E Armstrong will show the Newcastle excreta steriliser, and at 3.15 P.M. by train from Walker Gate Railway Station to Tynemouth. Railway tickets will in both cases be taken by the secretary. At 5 30 P.M. the party will return by steam launch from Tynemouth, arriving at Newcastle about 6 30 P.M. Arrangements have been made with a number of railway companies to issue return tickets to Newcastle upon-Tyne at a single fare and a quarter. Those who intend to be present at the meeting should apply to the honorary secretaries, 9, Adelphi-terrace, Strand, London, W.C., for the certificates to enable them to obtain reduced fares.

THE PATHOLOGY OF A CASE OF MALE HYSTERIA.

HYSTERIA, especially in its profounder developments, is rare in the male subject and though little is known as to its pathology and morbid anatomy in those who have died from its severer forms (some female subjects) still less is known regarding the pathology of male hysteria. At the recent annual meeting of the Association of American Physicians held at Washington in May Dr. S Weir Mitchell and Dr. W. G. Spiller contributed a paper on the subject which is published in *American Medicine* of May 28th. The case is one of unusual interest and is that of a man of middle age who had suffered from hysteria and had been more or less constantly under Dr. Weir Mitchell's observation and care during 30 years. The first symptoms appeared at the age of puberty and consisted of the usual attacks known as hysterical "fits" which occurred from time to time. The boy was at this time seen to be of a "nervous" and excitable disposition. There were no grave symptoms during this period. To the above attacks of simple hysteria a few years later there were superadded peculiar muscular movements—movements of the hands, the face, and the limbs of an apparently purposive but really involuntary character. The patient, under Dr. Weir Mitchell's advice, was treated with hypnotism with some degree of benefit, the movements ceasing under its influence for short periods of time but recurring within a few days. The mental phase of the hysteria was not marked in this case: there was no profound disorder or tendency to "doubling" or "disaggregation" of the sense of personality. The muscular disturbances, however, increased in intensity and caused the patient much discomfort. They were uncontrollable by the patient except by the greatest effort on his part or with the aid of hypnotism. The patient requested that after his death a necropsy should be performed under Dr. Weir Mitchell's direction and this was done recently on the occasion of his death by Dr. Spiller. A most careful examination of the brain and spinal cord disclosed absolutely no lesion to the naked eye or to the methods adopted at a necropsy and microscopical examination of parts of the brain also failed to disclose any characteristic or distinct lesions. There were not the signs of fatigue of the cerebral motor cells which, in accordance with experimental physiology, he had expected to find. Dr. Weir Mitchell hence concluded from this case and from the recorded evidences of a few cases of hysteria (in the female) studied post mortem that the disease must still be regarded as a functional disorder (associated in some cases with a developmental anomaly) of the brain. In the discussion which followed the communication of this paper at the meeting

mentioned above, Dr. James Putnam referred to the view that these continuous movements which hysterical patients sometimes carried on were the work of dissociated cerebral centres; they seemed to be performed without fatigue to the patient and differed from the "occupation spasms" (habit spasms) which occurred in some persons without any relation to hysteria, and which were brought on by work, and were attended with profound local fatigue of the affected parts. He therefore thought that the centres concerned in the hysterical phenomena described must be lower cerebral centres (infra-psychical), capable of automatic action. Dr. Morton Prince related the history of a similar case of male hysteria under his observation. Dr. H. Wood said that in order to account for the motor symptoms in Dr. Weir Mitchell's case it would be necessary to suppose that the lower centres in the brain occasionally assumed the form of activity of higher centres.

THE SALT TAX IN INDIA.

THE important question of the repeal of the salt tax in India has repeatedly received attention in our pages. It is, we observe, again coming to the front and sanguine hopes are entertained by some that the end is not far off. A meeting is to be held to-day, Friday, June 24th, at the Westminster Palace Hotel at 4.30 P.M., at which Mr. J. P. Pennington will read a paper dealing with the fiscal aspects of the proposed abolition. The chair will be taken by Mr. Jonathan Hutchinson who will deal with the bearings of the tax upon the health of the Indian community. He will, we understand, urge that the dearness of salt leads to the defective curing of various articles of food and also conduces to the malassimilation of many others. He will especially instance leprosy and calculus as two Indian maladies the incidence of which he considers may be reasonably attributed to a large extent to the deficient supply of good salt.

OBSTRUCTIVE LARYNGITIS IN MEASLES.

THOUGH laryngitis is one of the symptoms of measles it is seldom sufficiently intense to cause obstruction to the respiration. In the *Gazette Hebdomadaire des Sciences Médicales de Bordeaux* of May 8th Dr. M. de Certant has recorded the following remarkable case in which there was severe obstructive dyspnœa for 14 days. On May 3rd, 1903, he was called to a child, aged 22 months, who had large tonsils and adenoids and was taken ill two days before with coryza. The patient had had two attacks of laryngitis stridulosa. He was restless and had slight dyspnœa. There were sibilant and mucous râles in the whole chest, intense conjunctival and nasal catarrh, laryngeal stridor, aphonia, and the buccal eruption of measles. There was no membrane in the pharynx and the cervical glands were not enlarged. The temperature was 101·1° F. In the evening there was suprasternal recession and the epiglottis could be seen to be slightly congested. On the 4th there was stridulous laryngitis and the eruption of measles had appeared on the face; in the evening the eruption further developed and the recession was greater. A culture made from the laryngeal mucus showed only staphylococci and other cocci. The stridor persisted and on the 6th the temperature was 104°. On the 7th the stridor had diminished and the patient was improving. On the 8th the eruption had disappeared but recession of the chest was again present. However, air passed well into the chest and there was no trace of asphyxia. There were few râles. On the 9th the recession was slight but the laryngeal stridor returned. At three o'clock there was an attack of suffocation. On the 10th there were four other attacks. On the 11th the recession was marked but there were no attacks of suffocation. The recession was less on the 12th; it gradually diminished and by the 17th had disappeared. Two forms of laryngitis occur in measles—a primary form and one secondary to the eruption (*laryngite tardive*). The latter is the more serious; it begins on the third or fourth day of the eruption and is more likely to be accompanied by secondary microbial infections, which the catarrh of measles facilitates. The primary laryngitis, on the other hand, is fugitive and benign and diminishes as soon as the eruption appears. The preceding case is an exception; the appearance of the eruption was not accompanied by the slightest remission. Either form may be complicated by diphtheria but the secondary form is much the more likely to be so. In the present case diphtheria was excluded on several grounds: the bacteriological examination was negative, the laryngitis was primary, and the very swollen and congested pharynx and epiglottis showed no membrane. Laryngoscopic examination was not possible but if the stenosis was due to diphtheria the obstruction would have been progressive. The attacks of suffocation were due to spasm and were provoked by anything which irritated the child. Further, the dyspnœa was not accompanied by pyrexia. The temperature fell with the evolution of the eruption. Finally, there were no enlarged cervical glands. In the treatment of laryngeal obstruction in measles tracheotomy or intubation may be required but the practitioner should be very slow to operate. Tracheotomy should be performed only when asphyxial symptoms absolutely demand it.

THE annual general meeting of the Brussels Medical Graduates' Association will be held at the Trocadéro, Piccadilly-circus, London, W., on Tuesday, July 5th, at 6.30 P.M. At 7, for 7.30 P.M., the members and their guests will dine together, Dr. Major Greenwood, the President, being in the chair. Any Brussels medical graduate wishing to be present is requested to communicate with Dr. F. H. Edwards, Camberwell House, Camberwell, S.E., honorary secretary.

THE death is announced of Dr. Charles Kelly of Worthing. Dr. Kelly was at one time assistant physician to King's College Hospital and professor of hygiene in King's College, London. Subsequently he became medical officer of health of the West Sussex combined district, in which capacity he issued a report on the serious epidemic of enteric fever which occurred in Worthing and the neighbourhood in 1893. We hope to give a notice of his career in an early issue.

THE fourth annual South African Civil Surgeons' Dinner will be held on Tuesday next, June 28th, at the Hotel Cecil at 7.30 P.M., Mr. G. H. Makins, C.B., in the chair. Tickets, price 10*s.* 6*d.*, should be paid for at the dinner and further information may be obtained from Mr. C. Gordon Watson, 44, Welbeck-street, W.

A MEETING of the Pathological Society of London will be held at the Lister Institute, Queensberry Lodge, Elstree, on Saturday, July 2nd, in the afternoon. A train will leave St. Pancras at 1.50, returning from Elstree at 6.23 and reaching St. Pancras at 7 o'clock. The station is Elstree and Boreham Wood on the Midland main line.

Dr. F. M. Sandwith has been appointed to the teaching staff of the London School of Tropical Medicine.

THE prizes gained at the Royal Dental Hospital of London will be distributed by Sir William J. Collins on Wednesday,

July 13th, at 8 P.M precisely, at the Royal Institute Galleries, Prince's Hall, Piccadilly. Music and a conversazione, at which ladies will be present, will follow.

Dr. A. P. Luff has resigned his appointment as scientific analyst to the Home Office.

THE INSURANCE OF MEDICAL MEN AGAINST THE DANGERS OF THEIR PROFESSION.

POLICIES of insurance frequently or usually contain a condition that disputes arising under them will be referred to an arbitrator instead of to a court of law with the result that cases of difference between the insurers and the insured, of considerable interest to the latter class and also to the former, are at times contested but are heard little of beyond the parties and those immediately connected with them. An arbitration of the kind indicated between a medical man and an insurance company has recently ended adversely to the former, and as it contains elements of considerable importance to the medical profession it is well that some publicity should be given to it. It is not a matter which need be enlarged upon that medical men incur considerable risks of disease and injury in the course of their profession against which it would be prudent for them to insure themselves. It is also well known that the terms of an insurance are contained in the policy and that each party is bound by them and that the contract having been reduced to writing speaks for itself. Agents of insurance companies, it may be added, frequently discuss and explain, or purport to explain, the terms of the policies offered, and such verbal explanations as are given upon these occasions are frequently those of the agent only and not of the directors or more responsible managers of the company. In the case in question the person to be insured was Dr. John Eyre, bacteriologist and lecturer on bacteriology at Guy's Hospital, and the insurance which he effected was with the view, on his part, to protect himself against the dangers, *inter alia*, inevitably occurring in the pursuit of his duties as such. He made no concealment of this in conversation with the agent of the Scottish Accident, Life, and Fidelity Insurance Company, Limited, and he was told that the expression "septicæmia (blood poisoning)" in the passage in the proposed policy set out below was intended by the company to cover all post mortem and laboratory infections and that the company had so stated to the same agent when a predecessor of Dr. Eyre in the post of bacteriologist at Guy's Hospital had insured himself. The insurer contracted in the following terms:—

> If at any time ..... during the continuance of the policy the insured sustains any bodily injury by violent accidental and visible means, then ..... in case such injury does not entitle him to any other form of compensation under this policy, but independently of all other causes, necessarily, immediately and continuously confines him to the house, or totally disables and prevents him from attending at his place of business or to business of any kind, to pay to him compensation at the rate of six pounds per week during such disablement. (Clause I., Section D.)
>
> In case such injury ..... only partially disables him, or in case he has so far recovered from temporary total disablement as to be able to attend to some portion of his business, to pay him compensation at the rate of one pound ten shillings per week during such disablement. (Clause I., Section E.)
>
> Or, if at any time during the continuance of this policy the insured ..... contracts any disease, then, in case such disease, being one or other of the diseases following, viz.: typhus fever, typhoid fever (enteric), scarlet fever (scarlatina), relapsing fever (famine fever), meningitis (brain fever), variola (small pox), varicella (chicken-pox), diphtheria, morbilli (measles), pneumonia (inflammation of lungs), pleurisy, enteritis (inflammation of bowels), colitis, primary—(inflammation of bowels), peritonitis—acute, tonsillitis (inflammation of tonsils), laryngitis—catarrhal (inflammation of windpipe), appendicitis, pertussis (whooping cough), mumps, *septicæmia (blood poisoning)*, tetanus (lockjaw), rabies (hydrophobia), erysipelas, carbuncle, Asiatic cholera, malaria (ague), plague—bubonic, does not entitle the insured to any other form of compensation under this policy, but, independently, of all other causes, necessarily and continuously confines him to the house and totally disables and prevents him from attending at his place of business or to business of any kind to pay him compensation at the rate of six pounds per week during such disablement. Providing, as regards the accident portion of this policy, that the company shall not be liable where there is no direct and positive evidence of accidental violence to the insured within the meaning of this policy, nor where the accident or the death, injury, or disablement happens or is caused to the insured, wholly or partially, ... by anything administered or taken or swallowed or inhaled by the insured ..... by his or whilst he is wilfully or unnecessarily exposing himself in any way to any obvious danger or risk (except when endeavouring to save human life). .....

While the policy was in force Dr. Eyre was engaged in some experiments made in order to determine the thermal death point of the micrococcus Melitensis, in the course of which one of the glass pipettes employed in transferring measured quantities of the emulsion of the germs from the test-tubes to liquefied agar became obstructed and forcible suction was necessary before the emulsion would flow up into the pipette. Six days later Dr. Eyre experienced a rigor accompanied by a temperature of 104° F.; a diagnosis of septicæmia was made and the examination of the blood showed the presence of the micrococcus Melitensis. Dr. Eyre accordingly communicated in due course with the secretary of the Scottish Accident Insurance Company informing him of the fact that he had contracted Malta fever as the result of laboratory infection and requesting that the necessary forms should be forwarded in order that he might make formal application for compensation under the head of septicæmia. The following correspondence then took place:—

Scottish Accident, Life and Fidelity Insurance Company, Limited.
115, George-street, Edinburgh, 18th Aug., 19.

Policy No. 201,318.

DEAR SIR,—We duly received your letter of 13th inst. and were very sorry to learn that you were suffering from an attack of Malta fever, but this does not come within the scope of policy. We are liable only for the specific and general form of blood poisoning known as septicæmia (caused by pyogenic organisms) and the term blood poisoning in policy is put within brackets merely to give the public some idea of what septicæmia means and is not intended to include all varieties of blood poisoning.

Yours faithfully,
HARVEY ARMOUR, Secretary.

J. Eyre to Secretary, Scottish Accident, &c., Co.
August 9th, 1903.

re Policy No. 201,318.

DEAR SIR,—I am in receipt of your letter dated August 18th, 1903, and am surprised to find you repudiate liability under the policy. In asking you to reconsider the position I would like to point out:—

(1) When asked to exchange my old policy 105,682 for the present one (in March, 1902) I expressly enquired of your agent Mr. S. H. Croucher whether the new policy would cover *any* accidental infection contracted during, or as the result of, my work in the bacteriological laboratory, and was assured by him that it would do so.

(2) The accidental character of the present infection Malta fever is a septicæmia, due to the presence in the blood of a specific micro-organism, the micrococcus melitensis. The disease is not met with in England (i.e., new cases) except, and then very rarely, as the result of accidental inoculation in the laboratory with the specific germ.

(3) According to the wording of your letter you are liable for the form of septicæmia "caused by pyogenic organisms." I am ready to prove by actual experiment that the micrococcus melitensis is a pyogenic organism. Awaiting your reply,

I am, Sirs, yours faithfully,
JNO. EYRE.

Secretary, Scottish Accident, &c., Co., to J. Eyre.
August 21st, 1903.

Pol. No. 201, 318.

DEAR SIR,—We are in receipt of your letter of 19th inst., and from your remarks it seems that claim should be made on account of accident and not for septicæmia. We therefore enclose one of the forms applicable and if you will kindly have it completed, and returned to us, the matter will have further attention.

Yours truly,
HARVEY ARMOUR, Secretary.

In reply to this letter, and supposing the request to be a mere form to, so to speak, "save the face" of the company, Dr. Eyre filled up the details of the accident on August 22nd in the following words and forwarded the form to Dr. J. H. Bryant of Guy's Hospital for certification of disease, who then forwarded it to the Secretary, Scottish Accident, &c., Co.

> Accident occurred.—At 3 o'clock in the afternoon on the 29th day of July, 1903, at the Bacteriological Laboratory, Guy's Hospital.
>
> Accident, nature of.—The accident consisted in the inhaling of living germs whilst transferring measured quantities of an emulsion of the micrococcus melitensis from a test-tube to agar-plate cultivations by means of a pipette during the process of determining the thermal death-point of the micrococcus in question.
>
> Accident, witness to.—Dr. J. Candler, 116, Trinity-road, Tulse-hill, S.W.

As will be noticed, the suction effected by the application of the mouth to one end of the pipette in the attempt to aspirate the emulsion into the pipette was expressed as "inhaling," whereas to the medical mind septicæmia cannot be thought of apart from a lesion of some kind and the probable injury caused to the lip by the end of the pipette was not referred to. The secretary of the company treated the expression made use of thus:—

Secretary, Scottish Accident, &c. Co. to J. Eyre.
August 26th, 1903.

Pol. No. 201,318.

DEAR SIR,—Referring to completed claim form, when we wrote you on 21st inst., we were under the impression that you were suffering

from the result of an accident within the meaning of the policy, having read your letter of 19th that Malta fever had followed on accidental inoculation of the specific germ—i.e. that the germ had got entrance through some accidental abrasion or puncture of the skin. From the information now to hand, however, it seems we were wrong. The results of anything being swallowed or inhaled by a policy holder are specially excluded in policy and as Malta fever—the cause of your indisposition as certified—is not one of the specific illnesses we cover, we regret being unable to admit liability.—Yours truly,

HARVEY ARMOUR, Secretary.

J. Eyre to Secretary, Scottish Accident &c. Co.
August 27th, 1903.

re Policy No. 201,318.

DEAR SIR,—I am in receipt of your letter of 26th inst., and note the clause under which you refuse to admit liability. I regret having used the term "inhale," but I had no option but to fill in the claim form as I did, for I had no precise knowledge of the exact position and extent of the abrasion of the mucous membrane of the mouth (probably caused by contact with the rough end of the pipette of glass) through which the germs gained access to the general circulation. Malta fever being general septicæmia, characterised by the presence of the micrococcus melitensis in the peripheral circulation, the spleen, &c., it is patent that some such lesion or injury must have been inflicted, although in this instance it was so slight as to escape notice at the time, or exact recollection when symptoms of the disease supervened. Moreover, I still hold that my original claim under "Septicæmia" was the correct one under the circumstances.

If, however, your present attitude is final, it is obvious that these policies are of very little value to laboratory workers like myself, and I consider that your agent should be instructed accordingly, so that none of my colleagues or students may be led to take out policies under a similar misapprehension. As soon as I am able to resume my work at the hospital, which I trust will be within two or three weeks, I will make a point of seeing Mr. Croucher on the matter.

Awaiting your further reply, I am, Sir, yours faithfully,

JNO. EYRE.

Secretary, Scottish Accident &c. Co. to J. Eyre.
August 28th, 1903.

Policy No. 201,318.

DEAR SIR,—Your letter of yesterday is to hand, and we note your remarks with further reference to claim, but the case was most fully and carefully considered by our medical directors, and we regret we cannot depart from the decision already advised.

As regards your remarks about our policies, the benefit we cover are plainly and definitely stated, and we need hardly say that we are always prepared to make good our part of the contract and give the advantages offered when occasion arises.—Yours truly,

HARVEY ARMOUR, Secretary.

Dr. Eyre determined in these circumstances to press his claim and as, according to a condition of the policy, the matter had to be referred to arbitration the name of a medical man was proposed to decide it, on the ground that the question whether Malta fever contracted as described was septicæmia was a medical one. The company opposed this upon the ground that its point was a legal one and Mr. Justice Ridley made an order appointing a barrister, observing that a medical man would probably be biased in his opinion. Whether this was a sound reason for his decision is, perhaps, a matter open to doubt; at all events it would be interesting to see whether a barrister would be considered by a judge to be too liable to prejudice to arbitrate in a case where one of the parties was a member of the bar and where the point to be discussed was admittedly a legal one. The appointment of a medical man in preference to the barrister upon the imaginary occasion suggested would probably cause surprise. The arbitration in the case of Dr. Eyre was duly proceeded with; evidence was given on his behalf by Dr. A. E. Wright, pathologist to St. Mary's Hospital, Dr. F. W. Mott, pathologist to the London County Council's asylums, Dr. W. Bulloch, lecturer on pathology at the London Hospital, and Dr. R. T. Hewlett, professor of pathology and bacteriology at King's College. These gentlemen testified as to the nature of Malta fever and expressed the opinion that it was correctly to be described under the general term septicæmia. They further gave evidence that infection with Malta fever could not be a matter of inhalation but that a lesion of the skin or solution of continuity of some kind must necessarily have allowed the micrococcus to gain access to the circulation. In this they were not contradicted but much argument took place upon the construction of the policy, upon the place of Malta fever in the Nomenclature of Disease published by the Royal College of Physicians of London in 1892, upon the correspondence, and other topics. Ten days after the conclusion of the observations of counsel the arbitrator published his award which was that the company was under no liability to Dr. Eyre, who accordingly had not only to lose his case but to pay the company's costs. The arbitrator followed the usual and proper course in giving no grounds for his award. An arbitrator is not expected to do so and so long as he conducts the reference with propriety and decides the point or points referred to him there is no appeal against his decision. The point which he had to decide was whether the expression "septicæmia (blood poisoning)" in Dr. Eyre's policy, or any of the other expressions employed, covered and included or whether they excluded the disease from which Dr. Eyre suffered, contracted in the manner in which he became infected with it. Whether the decision given was right we do not propose to discuss. Perhaps we might be biased in the matter, as Mr Justice Ridley suggested that a medical arbitrator would be, and, moreover, our readers are competent to form their own opinions; but we would point out that to the medical profession the important feature of the case is the fact that the liability under the policy was disputed at all. Let us admit for the moment that the infection of Dr. Eyre when experimenting with the micrococcus Melitensis was not a danger covered by any phrase used in the policy. Let us, however, point out, what no one will dispute, that he informed the agent of the company of the object with which he insured himself and that terms general and particular were used in a policy drawn up by the company which, to the mind of a medical man at all events, included all the dangers which he was likely to encounter and the one from which he actually suffered. Let us then consider what is the position of a medical man, or of any other man, running special risks and endeavouring to protect himself against them by insurance, if the insurance company is going to take advantage of any accidental omission of a technical character should the occasion arise. If the insurance company was not aware of Dr. Eyre's occupation and of the nature of the risks to which he was liable, it was no doubt entitled to criticise his claim adversely, but no reference is made in the correspondence quoted to any such position being occupied by the company nor is there any statement that had Malta fever been suggested as a danger to be insured against it would have refused to insert it specifically in the policy. In these circumstances it is of importance that medical men who are either insured or contemplating insurance should consider with care the wording of the policies held by them or proposed to them and reflect whether all imaginable diseases are defined specifically or whether the general terms, used as such, are sufficiently wide for their purpose. Insurance is an excellent thing but if it opens a prospect of doubt and of litigation many will fight shy of it. The matter is also one for insurance companies to reflect upon, for if ingenious, though perfectly correct, defences are to be raised when a claim is made and what lawyers call a *casus omissus* can be discovered the sense of security which insurance gives will be diminished and insurance will be discouraged.

CHOLERA IN MESOPOTAMIA AND PERSIA.

(FROM THE BRITISH DELEGATE TO THE OTTOMAN BOARD OF HEALTH.)

A SOMEWHAT serious extension of the cholera epidemic has now to be recorded in Persian Kurdistan, while it is not diminishing on the Turkish side of the Turco-Persian frontier. It will be convenient to deal with the latter first. At Basra the following cases and deaths have been officially reported since the date of my last letter.[1]

From May	5th	to	14th	...	...	57 cases	... 45 deaths.
,, ,,	15th	,,	21st	...	...	44 ,,	... 38 ,,
,, ,,	22nd	,,	27th	...	...	16 ,,	... 12 ,,
,, ,,	28th	,,	June 3rd	...		31 ,,	... 18 ,,

Of the above total of 113 deaths 54 became known to the authorities only after death had taken place. It will be observed that there has been a slight diminution in the number of cases and deaths officially reported at Basra, but as so many cases are hidden this is unfortunately no guarantee that the epidemic is really declining there. Recently, too, the disease has appeared in the lazaret of Basra, on the island of Salahié, in the Shatt-el-Arab river, a short distance below the town of Basra. Two fatal cases occurred here among quarantined passengers on May 29th, ten fresh cases and three deaths on the 30th, and four cases with three deaths on the 31st. On June 1st there were three cases and four deaths, on the 2nd neither cases nor deaths,

[1] THE LANCET, May 28th, 1904, p. 1537.

on the 3rd five cases and two deaths, and on the 4th one case (a boatman in the employ of the lazaret) and two deaths (one being that of a servant employed at the lazaret). On the 5th there were not any cases but on the 6th one fresh case and one death were reported. Nothing is yet known as to the origin of this outbreak in the Basra lazaret and a strict inquiry has been ordered. Many (it is not clear from the telegrams whether *all*) of the cases have developed in a group of quarantined passengers from one particular steamer and it is as regrettable as it is undeniable that these passengers did not bring the infection with them but contracted it in the lazaret itself. This steamer arrived at Basra from Bombay on May 27th.

At Gourna (? Korna, at the junction of the Tigris and Euphrates) a sailing ship arrived on May 24th. It had left Basra six days before and reported on its arrival that a fatal case of cholera had occurred during the voyage. The ship was put in quarantine. One case and one death from cholera also occurred at Kourna (presumably the same as Gourna) on May 31st, two cases on June 1st, three deaths on the 2nd, two cases on the 3rd, and two deaths on the 4th. At Nasrieh five cases and seven deaths were reported between May 3rd and 11th, and 13 cases with nine deaths between the 12th and 21st. Since the last-named date this place has been reported free from cholera. At the village of Deshte, near Nasrieh, five fatal cases occurred before May 25th, and on the 30th it was reported that two women on the road from that place to Hay had been attacked by the disease and one had died. On the 28th an officer on board a Turkish gunboat at Basra, the *Kilid-ul-Bahir*, developed symptoms of cholera and died. At Remineh 16 cases and 12 deaths occurred between May 4th and 8th.

A rather serious outbreak of the disease is reported from Souk-el-Shioukh on the Euphrates and its neighbourhood. In the town itself 15 cases and three deaths were said to have occurred before May 31st and among tribes in the neighbourhood 20 cases with 14 deaths had been recorded. On May 31st six cases and seven deaths were reported in the town; on June 1st eight cases and four deaths; on the 2nd two cases and two deaths; on the 3rd the same number of each; and on the 4th four cases and one death. On the 2nd it was announced that the disease had appeared at Hamar, in the district of Souk-el Shioukh. At Shatra, in the district of Nasrieh, seven cases and four deaths were observed on the 7th.

At Samawa the outbreak was believed to have come to an end on May 9th, but on May 31st and June 1st four fresh cases and two deaths were recorded there. In the Shiah city of Nedjef a fatal case of cholera occurred on May 24th. This was followed by two more cases with one death on the 31st (the two cases in different quarters of the city) and one case and one death on June 2nd. At Divanieh 21 cases and 18 deaths occurred between May 18th and June 3rd. An extensive outbreak of cholera has also taken place among the tribes in the neighbourhood of Shamieh. In the week ending June 3rd 141 cases and 95 deaths were recorded among them and on the two days May 28th and 29th 16 cases and two deaths were reported from the town of Shamieh itself. At Amara (on the Tigris) three cases and one death occurred between May 10th and 12th and two more cases on the 14th. Since that date Amara is thought to have been free from cholera, but in an Arab tribe in its neighbourhood four cases were reported on May 24th and a military apothecary had been sent to inquire into the outbreak. Other places from which the presence of the disease is reported are El-cherid and Ebou-Beydé, in the *sanjak* of Montefik (24 cases and 14 deaths in the last week of May); Sevk, the chief town of the Montefik (10 cases and three deaths in the same period); Tchagar, in the *caza* of Shamieh (12 cases and six deaths from May 29th to June 3rd); Chenafieh and Gamas (single cases in each); Hamidié (ten cases and nine deaths before May 30th); and Kout (three cases and one death on June 1st). Finally, on May 31st it was reported from Bagdad that cholera had broken out in Bakouba, a town of importance to the north-east of Bagdad.

On May 18th a fatal case of cholera occurred on the s.s. *Mossul* shortly after leaving Amara on the journey between Basra and Bagdad. The ship proceeded up the river without touching anywhere to Garara, the quarantine station below Bagdad, where the passengers were landed in the lazaret and the ship was disinfected. A later telegram, dated from Bagdad June 4th, states that the ship had just arrived there, having lost two passengers from cholera *en route*, and it is further added that four more cases are under treatment—three from among her passengers and the fourth a member of the crew.

On the Persian side of the frontier cholera is now somewhat widely prevalent. It is difficult to follow the course of the epidemic here, as the telegrams are received irregularly and the names of places—generally obscure in any case—are often mutilated in transit. At Kermanshah the outbreak has been a severe one but appears to be now subsiding. The following figures have been furnished by the Ottoman Consul-General at Kermanshah (the numbers of cases and deaths are those which occurred between the dates of the successive telegrams):—

Date of telegram.	Cases.	Deaths.
May 11th	40	18
,, 18th	107	60
,, 24th	91	85
,, 25th	28	28
June 1st	?	32

The same authority telegraphed on May 25th that cholera had spread to the following places in the neighbourhood of Kermanshah: Hunkiah Esvabad, Sendour, Gulbayi, Mollabir, Sultanabad, and Irak-Adjemi, but that it was impossible to give figures for these places. (Irak-Adjemi, it should be noted, is the name of the province immediately to the east of Persian Kurdistan; the telegram should, therefore, probably be read: "..... Sultanabad *in* Irak-Adjemi.") It was further added that two-thirds of the population of Kermanshah had fled in panic to Helda, Beylan, and other villages. Another telegram was received from Hamadan on May 31st from the Ottoman sanitary delegate at Teheran, recently sent on mission to the infected districts. This telegram was much mutilated in transit, but apparently it means that 20 deaths per day have been occurring at Kermanshah and that a considerable number of cases have been observed at Hamadan and the following places (the names of which are not easy to recognise): Songour, Deoulet-Abad, Malayer, Apartie, and Kaboud-Rahang. It further adds that the epidemic is following the route of pilgrims returning from Kerbela, that the Kermanshah quarantine line has been crossed by the epidemic and that a new line is being organised between Kaboud-Rahang and Sultanabad.

At Khanikin, the Turkish frontier station, a pilgrim from Ispahan who had passed through Kermanshah was attacked by cholera on May 13th. On the 15th it was reported that 29 cases had occurred among troops and had been isolated in the military hospital. It is thought that this may be a telegraphic error, as only from one to four cases have been reported daily since from Khanikin. Thus from May 15th to June 6th the total recorded cases numbered 29 and the deaths 18. In reply to a request for fuller information as to the early course of the outbreak there the sanitary officer of Khanikin telegraphed on May 25th that he had personal knowledge of 11 cases and nine deaths occurring between the 13th and 23rd of that month, besides other deaths of persons whose bodies had been secretly buried at night. The first case he himself had seen was on the 15th; the patient was a soldier, isolated in the military hospital.

Finally, on the 1st inst. it was reported from Bagdad that (according to information given by passengers arriving at the lazaret) nine cases of cholera had occurred on May 31st at Kassir Sherin, five hours' distance from Khanikin, on the Kermanshah road.

Constantinople, June 8th.

THE LAST SCHOOL BOARD REPORT.

THE School Board for London has recently issued an important document entitled the "Annual Report of the Medical Officer for the Year ending March 25th, 1904," the present being presumably the last report which we shall receive from the London School Board as at present constituted. As this report is not signed it is not easy to discriminate between those parts which are the work of the so-called "subcommittee of the medical officers' department" and those parts which are from the pen of the medical officers themselves whose names are mentioned incidentally

in the report. The subcommittee reports in considerable detail on the ever-increasing work of its department under six sections—the first two of which, being mainly administrative in character, we shall pass over with the remark that as these sections relate to the physical condition of school children, particularly to their examination as regards measurements, physique, hearing, vision, nutrition, and the like, they will probably be of interest to the Physical Deterioration Committee of the Privy Council which has for some time been engaged in the consideration of this intricate subject in its relation to the population of the country generally. The third section, dealing with "Infection in School," will doubtless be especially interesting to our readers. In any event, it contains numerous items of advice which, having been based on prolonged experience, will be valuable to the new educational authorities of England and Wales in the execution of their somewhat onerous duties under recent legislation.

The staff of the School Board's medical department consists of the principal medical officer, four assistant medical officers, six ophthalmic surgeons, and six nurses. With this staff, which will scarcely be considered excessively large, the medical officer has accomplished a mass of work which is specifically dealt with in the report but the details of which we cannot even enumerate in the space at our disposal. We are informed that prior to the year 1891 no attempt had been made by the School Board to control the spread of contagious or infectious maladies amongst children by the adoption of precautionary measures. By the Public Health Act of 1891, however, the teachers of every school attended by children from infected houses are entitled to receive intimation from the medical officer of health concerning the occurrence of the ordinary notifiable infectious diseases in such houses. In addition to the scheduled infectious diseases the notification of which is compulsory under the Act there are other infectious diseases that are dangerous to school children, chief among these being measles, mumps, whooping-cough, and chicken-pox. In the event of a child showing symptoms of any of the diseases last mentioned, or of any of the diseases specially scheduled as notifiable, or in the event of such disease being known to exist in the house from which any school child comes, the child referred to is at once excluded from attendance at school and certain other precautions are taken which are duly set forth in the report and which have evidently been found effectual for preventing the spread of infection. As regards "school closure," the committee, apparently with its medical officers' concurrence, offers much reasonable and practical advice which cannot fail to be serviceable to the new educational authorities of the kingdom when they come to face the troublesome problem of preventing the spread of infection among the school children committed to their charge. As to whether or not closure of a school should be enforced in any particular case no invariable rule appears to have been followed. We learn from the report that the actual practice of the Board is avowedly a compromise in which the risks of disseminating disease are balanced against the benefits of school attendance. Speaking generally, the practice has been to watch the incidence: formerly it was only after the lapse of at least a week that knowledge of these cases came to the medical officers' department, but more recently, by a rearrangement of forms, information as to a child's absence on account of illness sometimes arrived on the following day.

In some few cases it is reported that differences of opinion as to whether a school should or should not be closed have arisen between the Board's medical staff and the local medical officers of health, and in such cases, which last year did not amount to half a dozen in all, closure has been adopted by the Board whenever a decided wish to that effect has been expressed by the local authorities or their medical officers of health. Generally each case is dealt with on its own merits, although certain general principles that underlie the Board's action are indicated in the report. Some diseases appear to be fairly controllable; others, on the contrary, are almost beyond control. Formerly, in the case of measles, for example, closure was invariably resorted to when the absences reached the proportion of 10 per cent. Now, however, the question of duration of excessive prevalence of measles in the neighbourhood of the school is taken into consideration. If the disease is generally prevalent in a district closure of the schools is not resorted to so readily as it would be in the case of fresh incidence in a district. If two or three cases occur in one class in an infant school the class will probably be closed but when the cases are scattered over several classes closure is seldom adopted. In about half of the cases where this expedient is enforced the disease appears to be arrested; on the other hand, in about the same proportion of cases where closure is not attempted no spread of the disease has taken place. In the event of small-pox becoming prevalent in a district the School Board medical officers believe the best treatment to be, not the closure of classes or schools, but the temporary exclusion of unvaccinated children; and they sensibly remark that the sanitary authorities will probably prefer this expedient to the general closure of schools or even the exclusion of children from particular districts. It is in the case of scarlet fever that the effects of individual exclusion at the first signs of illness appear to be most marked. In the cases detected "peeling" in school the occurrence of subsequent cases does not seem to point to school infection. It is not these peeling cases, say the medical officers, that are to be dreaded in school; it is the convalescents with discharging ears or nostrils that are the carriers of mischief. In several cases during last year an uncomfortable suspicion of hospital "return" cases has arisen, and in others, cases sent to hospital with scarlet fever have reappeared as carriers of diphtheria. The medical officers offer the following useful opinion which we hope will be generally acted upon—that for scarlet fever cases with discharge from the ears or nose a stay in a convalescent establishment away from the hospital before return to school would be an increased safeguard.

It is the practice with the medical officers of the Board to attach great importance to mild or latent cases. This is especially necessary in the case of small-pox, mild or modified attacks of which are frequently mistaken for chicken pox. "Diphtheria," say the medical officers, "is so serious that a medical man is not justified in certifying anyone to be definitely free from that disease without a bacteriological test."

The completeness of the present report from a statistical point of view has been insured by the insertion of a series of charts showing the weekly number of notifications of attacks by scarlet fever and diphtheria: (*a*) in the community generally; (*b*) among children of school age; and (*c*) among board school children. The effect of holidays on the incidence of infectious disease is also traced in the charts after the fashion adopted by Mr. Shirley F. Murphy in his reports to the London County Council.

Under the head of "Personal Cleanliness" the medical officers' subcommittee proffers excellent advice which will, we trust, be taken to heart by the school authorities of the future. It impresses upon teachers the necessity of scrupulous attention to what is a truism among medical men—namely, the fact that much of the disease and of the temporary or even permanent injury to health suffered by children is the result of personal uncleanliness. A very considerable part of the defective vision noticed among the scholars is due to this, resulting in ulceration of the cornea, inflammation of the eyelids, and in chronic conditions which are aggravated by neglect. Where there exist wounds or sores, chilblains, discharging ears, and so on, dirt and neglect invariably aggravate those conditions. Attention to personal cleanliness is one of the first sanitary precautions and a most important object to be attained in schools. Unclean heads, generally in consequence of pediculi, are a frequent cause of absence. These cases could be cured in a week or ten days, but they are frequently allowed to continue untreated for months, the parents having found out that unclean heads in the children are a safeguard against compulsory school attendance. Ringworm is a widely diffused disease most frequently seen among boys, and occasionally in "crops" that suggest infection through barbers' shops. In many cases it passes into a chronic condition and may last for years. In the majority of cases after a few weeks no attention is paid to this complaint and if children are excluded they are in danger of passing months away from school. Even with the greatest care and attention a case of ringworm may last for months. In the course of last year three additional nurses were appointed to visit schools and to draw attention to ringworm infection and other similar conditions among the children. Their work varies from day to day; sometimes all the children in a class are examined, sometimes only those selected by the teacher, and generally cases are brought to light by the nurse herself which would have escaped attention in her absence. The nurses are doing useful work without in any degree weakening the

responsibility of parents in regard to the care of their children. The nurses' visits are in a measure educational for scholars and teachers alike, for they direct attention to matters of cleanliness which the Education Code neglects and which most inspectors overlook. In the homes the nurses' opinion carries weight, in some cases stimulating parents to do their duty and in others securing the attendance of children who would otherwise have escaped school. The good effects on the home are referred to by nearly all the teachers who have reported on the nurses' work and some refer to the diminished absence on account of hospital attendance.

(To be concluded.)

THE SECOND CONVERSAZIONE OF THE ROYAL SOCIETY.

THE second conversazione of the Royal Society, at which it is the custom to admit ladies, was held on June 22nd, when Sir William Huggins, K.C.B., O.M., D.C.L., and Lady Huggins received the visitors. The rooms of the society were beautifully decorated with flowers and the exhibits, though fewer in number than on the first occasion, were generally more striking and attractive.

Amongst the exhibits which claimed a very large share of attention were two very interesting experiments which were demonstrated by two distinguished ladies. Mrs. D. H. Scott showed the application of photography to the movements of plants by means of the kammatograph. The photographs are taken at intervals, varying according to the rapidity of the movements of the plants during several days and sometimes weeks; they are then shown on the screen in the kammatograph, which is a kind of kinematograph, and thus the movements of many days can be followed in a few seconds. The opening and closing of the flowers and movements of the stamens, which may be spread over a fortnight, can be watched in a few seconds. Similarly the twining of two leaf stalks round a support can be witnessed. Again, the reopening of leaflets and afterwards the closing for the night are pictorially represented. The effects are very beautiful and were universally admired. Mrs. Hertha Ayrton illustrated in a very practical way the origin and growth of the sand ripples on the sea shore. When sand is spread quite evenly on the bottom of a trough and water is oscillated above the sand so as to produce stationary waves, a small ridge is formed where the horizontal velocity of the water is greatest, next a ridge is started on each side of the first which grows, then two more ridges are started, and so on until the whole surface of the sand is ripple-marked. The ripples, as was shown, are not produced by a steady current of water, but only when this current is disturbed; a steady current in fact will erase any ripples that may have been produced. Mr. J. W. Gordon once more exhibited his compounding draw-tube and oscillating screen by which greater magnification and clearer definition are obtained in the microscope. On this occasion the object exhibited was a phagocyte which had ingested tubercle bacilli. The specimen was lent by Dr. A. E. Wright and illustrated his method of measuring the resistance of the organism to the tubercle bacillus. Obviously, as the resisting power in this method is measured by counting the number of bacilli ingested it is of importance that the image should be perfect and on a scale of magnification to permit of easy counting. Professor J. B. Farmer and Mr. J. E. S. Moore exhibited models to illustrate the reduction in heterotype divisions in animals and plants. The models illustrated the more important phases of the heterotype nuclear division and other models were shown illustrating the respective differences exhibited by corresponding phases of somatic and homotype nuclear divisions. The Hon. R. J. Strutt exhibited a specimen of radium salt in a glass tube supported by an insulator in an exhausted vessel. An electroscope was attached to the radium tube. Negatively electrified particles are shot off by the radium and penetrate the glass tube which is coated with conducting material so as to act as an inductor. A positive charge is thus left which causes divergence. As soon as the electroscope leaf touches the outer vessel which is connected with the earth it collapses and begins to charge again. As this action will go on as long as the radium lasts the experiment is the best example of apparent perpetual motion taking place that has been witnessed. Many of the exhibits shown at the previous conversazione were repeated. Among these may be mentioned the photographs illustrative of induced radio-activity of bacteria by Dr. Alan B. Green and the brilliant experiments with some new phosphorescent compounds by Mr. H. Jackson and Mr. D. Northall-Laurie. The physiotype exhibited by Mr. Francis Sheridan was the centre of much interest. This apparatus produces permanent printing without the use of inks and is specially adapted for taking finger prints and for the reproduction of designs from animal and vegetable life. The subject to be reproduced is merely pressed on paper and an invisible impression is developed with a coloured powder into a dark and permanent print. The designs are beautifully defined and exact; the method will doubtless be employed in a great number of valuable applications. Mr. Killingworth Hedges exhibited a number of very interesting photographs and drawings illustrating the behaviour of lightning on certain buildings which were struck and damaged, notwithstanding that they were provided with lightning conductors, while the Royal Meteorological Society exhibited some models and photographs of large hail stones, as well as some photographs depicting clouds, frost fronds, icicles, lightning flashes, sheep killed by lightning, and amongst other things shown were the boots of a man struck by lightning, showing the peculiar nature of the damage.

In the meeting room the electric lantern was used to illustrate the Hon. R. J. Strutt's experiment of a charge of negative electricity being fired off by radium and Mr. Francis Fox showed his lantern slides illustrating the wonderful engineering operations at the Simplon tunnel, while Mr. F. Enock exhibited his beautiful coloured photographs of living insects.

SPIDER PILLS.

(FROM A CORRESPONDENT.)

A CORRESPONDENT, pleading that "a little nonsense now and then is relished by the wisest men," sends the following amusing article:—

The "Looking Back" passage from THE LANCET of April 15th, 1826, is full of suggestiveness and interest. We can see, as in our mind's eye, the medical pupil listening, perhaps not too eagerly, to a lecture on the treatment of intermittents until he is roused to attention by a remedy being recommended which seems to him puerile and grandmotherly. Deprived of the relief of audible dissent and debarred from argument, but yet filled with the serenity of youthful wisdom, he hastens away and sits down, after the manner of Englishmen, to write to his favourite paper. The lecturer had spoken in favour of cobweb pills! and such indefinite pills! No formula, no directions as to dosage or administration, no record, except the testimony of some other pupil whose name was not disclosed. Why did not "the docile doctor"—as he calls the lecturer—follow nature more closely and advocate the use of spiders rather than the webs they produced, not merely the rare kind in which healing virtue was presumed to dwell, but the ordinary species which more abundantly inhabit our houses! Without actual condemnation of the doctor's counsel it is evident that he considers it more fitted for the University of Laputa than any other sphere of study.

The editorial comments upon the letter must have considerably surprised its writer. If he had expected sympathy and support for his scepticism he must have been sadly disappointed. Within the scope of a few lines it was shown that tradition, ancient learning, and general practice together had at least sanctioned the employment of spiders as well as cobwebs in medicine, more especially for agues. The black spider, so far from being held up to scorn, was proved to have been held in esteem for its febrifuge qualities from the days of Dioscorides, while the Indians of North America shared with our own country folk a common faith in cobwebs. By parity of reasoning it was claimed to be no more absurd to assume curative properties in a spider than in the cantharis, although the question whether both were equally beneficial was not entered upon. How "the docile doctor" must have chuckled as he found his position so far justified,

even though Dioscorides may well have been outside his acquaintance. But it is evident that he did not succeed in restoring the reputation of *aranеus niger* as a ready-made bolus or bring about a return of popularity for cobweb pills.

Readers of Longfellow will remember that Basil, the blacksmith, says in "Evangeline"—

> "Only beware of the fever, my friends, beware of the fever:
> For it is not like that of our cold Acadian climate
> Cured by wearing a spider round one's neck in a nutshell!"—

which discounts the value of primitive practice among the natives of North America, since the probability remains that the use of spiders has been adopted from the settlers. There is reliable evidence of similar use and wont over here. Burton, the historian of Leicestershire, tells how his mother followed the spider cure but that he regarded it for a long while as a manifest absurdity, since the creature was not taken by the patient—which would have been considered quite in order in the days when lice and ants and vipers were compounded for the sick—but was worn in a nutshell which was "lapped round with silk." At length he says: "Rambling amongst authors I found this very medicine in Dioscorides, approved by Matthiolus, repeated by Alderovandus, I began to have a better opinion of it and to give more credit to amulets when I saw it in some parties answer to experience." Then there is the positive testimony of Elias Ashmole in his diary (1681): "I took early in the morning a good dose of elixir and hung three spiders about my neck and they drove my ague away." He devoutly adds "Deo gratias," but we are unhappily unable to record what the doomed spiders thought about it. And with his conversion to charms and respect for ancient authority we may wonder what would have happened if Burton had come across the prescription of Serenus Sammonicus, once in great esteem as a physician, that there should be placed under the head of one suffering from a quartan ague the fourth book of the Iliad!

It is possible that spiders may in some places still be retained in the domestic pharmacopœia. We should naturally look for instances in rural neighbourhoods, the more remote from railways and reading rooms the better, and should, of course, seek them more particularly in parts of the country where agues are most prevalent. Mr. T. F. Thistleton Dyer in his "Domestic Folk Lore" quotes the spider among other popular remedies for whooping-cough, the treatment consisting in the holding of the unfortunate victim over the head of the child while this rhyme was thrice repeated:—

> "Spider, as you waste away
> Whooping-cough no longer stay,"

and then putting the charm to proof by inclosing the spider in a bag and leaving it to die and to decay. Oil in which spiders had been boiled is mentioned as a remedy for earache, but it was always, first and last, agues that were presumed to offer spiders their chief opportunity and that whether they were taken internally or condemned to death in their nutshell prisons.

We may fairly conclude that the credulous faith in the efficacy of spiders, without contact, has brought them freedom from pursuit for physic. Patients might have continued to swallow them and their webs but could not in these matter-of-fact days tolerate them as amulets and so both practices went out together. It is significant that later accounts of the medical employment of spiders insist, as did the docile doctor in his lecture, that imagination could have nothing to do with the results obtained, since patients were kept in ignorance of what was being given to them. An incidental contribution on this subject in "Cassell's Popular Educator" refers to a lady in Ireland who acquired fame for her success in treating agues and states that her only medicine was pills of treacle, inclosing spiders. In that case it was again claimed that mental influence had nothing whatever to do with the cures because the composition of the pills was kept secret. Paste was also said to have been the vehicle used when spiders were similarly administered in Lincolnshire, so that the treacle could have had no particular value. There remains, then, an appeal to *experientia docet* if there was any reality in the results attributed to spiders and cobwebs, and the question remains whether Harriet Martineau's maxim that "the many are generally right" can be applied to a belief in the curative properties of spiders widely accepted through many ages. Still how precarious is scepticism in these days! We have had to leave off making jokes at the expense of John de Gaddesden and his scarlet-cloth treatment of small pox since the remedial control of light has been demonstrated, and who can tell whether the febrifuge virtues of the spider may not yet be vindicated—to the sorrow of all the aranoid race if it could but know it.

This little excursion into one of the by-ways of medicine may take us yet a little farther afield. In the early years of the eighteenth century a French *savant*, M. Bon, undertook to prove that silk might be produced from spiders more freely and more profitably than from silkworms. What he accomplished and wherein he failed mattereth not now. It sufficeth to know that spider silk did not come within the range of practical commerce. But in the controversy that for a time raged round the promised textile the doubt was raised whether the old opinion that the spider was venomous might not be tenable and whether this detriment would not extend to articles made from the silk it furnished. "Mons. Bon combated this prejudice by the assertion that he had several times been bitten by spiders when no injury had ensued and that the silk, so far from being pernicious, had been found efficacious in stanching and healing wounds, its natural gluten acting as a kind of balsam. Determined upon exacting every possible good from this his favourite pursuit he subjected the spider silk to chemical analysis and obtained from it a volatile salt, preparing which in the same manner used for Guttæ Anglicanæ, once so famous all over Europe, he produced drops which, as he believed, possessed greater efficacy than even those. He called this preparation Montpelier drops and recommended its application in all lethargic diseases." (Silk Manufacture: "Lardner's Cabinet Cyclopædia.")

How silk was reduced to salts and oils, and especially to spirits by distillation, forms quite another story, open to any student of old Herbals. But that matter, as well as the entertaining history of the English drops which M. Bon hoped to outdo, cannot be entered upon now.

THE SITE OF ST. GEORGE'S HOSPITAL.

THE question of the desirability of removing St. George's Hospital to a larger site was considered by a special court of the governors of the hospital held on June 21st at the Westminster Palace Hotel, London, under the Presidency of Lord WINDSOR.

Mr. C. G. HEATHCOTE moved:—

That it is not desirable at the present time and under existing circumstances to remove St. George's Hospital from its present site.

He said that those who wished to remove the hospital stated that a new one could be built for £325,000. Their proposal was to barter away the hospital upon the assumption that the present site would realise more than that sum. The plan practically asked the governors to throw away the whole value of their leasehold interest. Mr. Heathcote then proceeded to give in detail the arguments put forward against removal. The buildings, he said, were expensively built and still apt for the purpose, the site was splendidly healthy and accessible, and the hospital was needed by the public at Hyde-park Corner.

Mr. C. T. DENT seconded the motion and in the course of his remarks observed that the reputation of a hospital had more to do with filling its wards than the position of the building. The medical staff were naturally anxious to secure the best building in which to work but they were satisfied to remain as they were until the hospital was in a position to supply their requirements. In all the circumstances he urged that it was expedient for the hospital to remain where it was.

Mr. R. H. C. HARRISON spoke in favour of the removal of the hospital. If the value of the site was realised the removal of the hospital could be carried out without difficulty. It was estimated that the purchase money for the site would bring in sufficient to build a new hospital and leave a substantial balance.

Mr. R. THORPE supported the views expressed by Mr. Harrison and contended that it was not possible to say what offer they would have for the present site of the hospital because they had never been able to ask for such an offer to be made.

The motion was then put to the meeting and declared carried by a large majority.

The following motions were adopted:—

That the newly acquired site in Knightsbridge should be utilised for

the immediate requirements of the hospital as soon as occasion shall serve provided that no building be commenced and placed on the land recently acquired in Knightsbridge unless the building is of such a kind that it will form a definite and convenient part of a new hospital, or until a complete plan of this new hospital has been carefully considered.

That it is desirable at once to negotiate with the Duke of Westminster for the purchase of the leaseholds on the terms proposed in the letters from His Grace's solicitors of March 10th, 1899, and Jan. 6th, 1904, at the price of £23,700.

The proceedings terminated with the reading of a letter from Dr. Robert Barnes offering the sum of £1000 for the improvement of the medical school. He mentioned in the letter that in his opinion the hospital best fulfilled its purpose on its present site.

METROPOLITAN HOSPITAL SUNDAY FUND.

THE following are some of the principal amounts, additional to those already announced in THE LANCET, received at the Mansion House up to Tuesday evening, when the sums paid in amounted to £26,000 :—

	£	s.	d.
St. Jude's, South Kensington	416	0	0
St. Paul's, Onslow-square	378	0	0
All Saints, Ennismore-gardens	367	0	0
St. Paul's, Portman-square	360	0	0
St. James's, Piccadilly	284	0	0
St. George's, Hanover-square	278	0	0
Church of the Annunciation, St. Marylebone	229	0	0
St. Mark's, Hamilton-terrace	225	0	0
Union Chapel, Islington	201	0	0
St. Stephen's, South Dulwich	181	0	0
St. Matthew's, Bayswater	168	0	0
Holy Trinity, Sydenham	160	0	0
Westminster Abbey	154	0	0
Emmanuel Church, Wimbledon	142	0	0
St. Peter's, Brockley	140	0	0
Christ Church, Mayfair	134	0	0
St. Mary's, Kilburn	129	0	0
St. Andrew's, Well-street	125	0	0
Temple Church	121	0	0
Holy Trinity, Roehampton	117	0	0
Holy Trinity, Wandsworth	113	0	0
All Souls', Hampstead	110	0	0
Great Stanmore Parish Church	106	0	0
St. Thomas's, Portland-square	97	0	0
St. Andrew's, Leytonstone	91	0	0
Greek Church, Bayswater	89	0	0
Holy Trinity, Paddington	89	0	0
St. George's, Tufnell Park	88	0	0
St. Stephen's, Ealing	88	0	0
St. Saviour's Church, Chelsea	82	0	0
Rosslyn Hill Chapel	77	0	0
Stoke Newington Parish Church	76	0	0
St. Mary's, Boltons	73	0	0
St. Mark's, Reigate	72	0	0
St. Michael's, Highgate	72	0	0
St. Andrew's, Westminster	68	0	0
St. Luke's, Hackney	68	0	0
Kensington Congregational Church	66	0	0
Bromley, Kent, Congregational Church	61	0	0
Streatham Parish Church and All Saints'	61	0	0
Christ Church, Hornsey	60	0	0
St. Mary's, Lewisham	60	0	0
Weybridge Parish Church and St. Michael's	59	0	0
Christ Church, Lee	58	0	0
St. John's, Putney	57	0	0
Brompton Oratory	56	0	0
Christ Church, Newgate-street	55	0	0
Christ Church, Brondesbury	54	0	0
Church of the Immaculate Conception, Farm-street	54	0	0
Church of the Ascension, Blackheath	52	0	0
Dutch Church, Austin Friars	52	0	0
All Saints', Margaret-street	51	0	0
Holy Trinity, Upper Tooting	50	0	0
St. Paul's, Finchley	50	0	0
St. Paul's, Wimbledon Park	50	0	0
St. Mary Magdalen, Wandsworth-common	49	0	0
St. Matthew's, Hammersmith	48	0	0
St. Stephen's, Wandsworth	48	0	0
All Souls', Notting-hill	47	0	0
Highgate Presbyterian Church	47	0	0
St. Paul's, Great Portland-street	44	0	0
St. Peter's, Streatham	44	0	0
All Saints', Blackheath	43	0	0
St. Matthew's, Ealing	42	0	0
St. Paul's, Forest-hill	42	0	0
Gray's Inn Chapel	40	0	0
St. Alban's, Holborn	40	0	0
St. Luke's, Hornsey	40	0	0
St. German's, Blackheath	38	0	0
St. Andrew's, Whitehall Park	36	0	0
Carmelite Church	35	0	0
Christ Church, Woburn-square	35	0	0
St. Stephen the Martyr, Avenue-road	35	0	0
Hursley Parish Church	34	0	0
Ferme Park Baptist Chapel	33	0	0
St. Mary the Virgin, Hampstead	33	0	0
Hammersmith Parish Church	32	0	0
St. George's Presbyterian Church, Brondesbury	32	0	0
Parish Church, Chigwell	31	0	0
St. Anselm's, Pinner	31	0	0
Clapham Congregational Church	30	0	0
Fulham Parish Church	30	0	0
Keston Parish Church	30	0	0
St. Anselm's, Davies-street	30	0	0
St. George's Garrison Church, Woolwich	30	0	0
St. Mark's, Notting Hill	30	0	0
St. Stephen's, Hampstead	30	0	0
Leytonstone Congregational Church	29	0	0
St. George's, Bloomsbury	29	0	0
St. Matthew's, Sydenham	29	0	0
St. Margaret's, Upper Norwood	28	0	0
Gordon-square Apostolic Church	28	0	0
High Beech Parish Church	27	0	0
Ewell Parish Church	27	0	0
All Saints', Tufnell Park	26	0	0
St. Matthew's, Westminster	26	0	0
St. Peter's, Ealing	26	0	0
St. Simon's, Chelsea	25	0	0
Belgrave Chapel, Halkin-street	24	0	0
Park Chapel, Chelsea	24	0	0
Kentish Town Parish Church	23	0	0
Plumstead Parish Church	23	0	0
Upper Holloway Baptist Church and Mission	23	0	0
All Saints', Highgate	22	0	0
St. Andrew's, Alexandra-park	22	0	0
St. Paul's, Kilburn	22	0	0
Woodford Parish Church and Mission	22	0	0
Christ Church, East Greenwich	21	0	0
Ethical Religion Society	21	0	0
St. Katherine's Royal College Hospital	21	0	0
St. Paul's, Upper Holloway	21	0	0
St. Peter's Presbyterian Church, Upper Tooting	21	0	0
West Hackney Parish Church	21	0	0
Chelsea Apostolic Church	20	0	0
Duke of York's School	20	0	0
St. Sepulchre's, Snow-hill	20	0	0
Woolwich Tabernacle	20	0	0

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 76 of the largest English towns 8595 births and 4029 deaths were registered during the week ending June 18th. The annual rate of mortality in these towns, which had been 15·4, 14·6, and 14·2 per 1000 in the three preceding weeks, further declined last week to 13·8 per 1000. In London the death-rate was 12 8 per 1000, while it averaged 14·2 per 1000 in the 75 other large towns. The lowest death-rates in these towns were 1·7 in Handsworth (Staffs), 4 5 in Ipswich, 6·5 in Southampton, 6 6 in Leyton, 6·8 in Bootle, 6·9 in Tottenham, 7·0 in King's Norton, and 7·5 in Willesden and in Walthamstow ; while the highest rates were 17·9 in Hanley, 18·1 in Preston, 18·6 in Leeds, 18·7 in Liverpool, 20·0 in Manchester, 20·6 in St. Helens, 22·6 in Tynemouth, and 23 7 in Stockport. The 4029 deaths in these towns last week included 437 which were referred to the principal infectious diseases, against 519, 495, and 492 in the three preceding weeks; of these 437 deaths 186 resulted from measles, 101 from whooping-cough, 69 from diarrhœa, 35 from scarlet fever, 29 from diphtheria, 16 from "fever" (principally enteric), and one from small-pox. In Hornsey, Tottenham, Reading, Northampton, Devonport, Newport (Mon.), Merthyr Tydfil, and in ten other smaller towns no death from any of the principal infectious diseases was registered ; among the other towns the highest death-rates from these diseases were recorded in Aston Manor, Derby, St. Helens, Warrington, Oldham, Burnley, Blackburn, and Rotherham. The greatest proportional mortality from measles occurred in Croydon, Norwich, Hanley, King's Norton, Derby, Birkenhead, St. Helens, Burnley, and Hull ; from scarlet fever in Warrington and York ; from diphtheria in Rotherham ; from whooping-cough in East Ham, Aston Manor, Warrington, and Blackburn; and from diarrhœa in Aston Manor. The mortality from "fever" showed no marked excess in any of the large towns. One fatal case of small-pox was registered in Stockport but none in any other of the 76 towns. The number of small-pox cases remaining under treatment in the Metropolitan Asylums hospitals, which had been 118, 96, and 95 on the three preceding Saturdays, had further declined to 80 on Saturday last, June 18th ; seven new cases were admitted during the week, against 33, 10, and 21 in the three preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital at the end

of last week was 1630, against 1663, 1673, and 1647 at the end of the three preceding weeks; 206 new cases were admitted during the week, against 194, 207, and 193 in the three preceding weeks. The deaths in London referred to pneumonia and diseases of the respiratory system, which had been 188, 181, and 157 in the three preceding weeks, further declined last week to 142 but were seven in excess of the number in the corresponding period of last year. The causes of 40, or 1·0 per cent., of the deaths registered in the 76 towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Bristol, Nottingham, Salford, Bradford, Hull, Newcastle-on-Tyne, and in 53 other smaller towns; the largest proportions of uncertified deaths were recorded in Birmingham, Wallasey, Liverpool, St. Helens, Warrington, Manchester, Preston, Sheffield, and Sunderland.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been 17·6, 18·1, and 16·2 per 1000 in the three preceding weeks, rose again to 17·0 per 1000 during the week ending June 18th but was 3·2 per 1000 in excess of the mean rate during the same period in the 76 large English towns. The rates in the eight Scotch towns ranged from 9·7 in Leith and 14·2 in Greenock to 19·1 in Dundee and 20·0 in Perth. The 563 deaths in these towns included 21 which were referred to whooping-cough, 20 to diarrhœa, 14 to measles, four to diphtheria, three to small-pox, two to scarlet fever, and two to "fever." In all, 66 deaths resulted from these principal infectious diseases last week, against 62, 64, and 78 in the three preceding weeks. These 66 deaths were equal to an annual rate of 2·0 per 1000, which was 0·5 per 1000 above the mean rate last week from the same diseases in the 76 large English towns. The fatal cases of whooping-cough, which had been 29, 26, and 21 in the three preceding weeks, were again 21 last week, and included 11 in Glasgow, six in Dundee, and two in Edinburgh. The deaths from diarrhœa, which had been 15, 20, and 24 in the three preceding weeks, declined again last week to 20, of which 12 occurred in Glasgow, two in Edinburgh, two in Dundee, and two in Aberdeen. The fatal cases of measles, which had been 16 in each of the two preceding weeks, declined to 14 last week and included five in Greenock, four in Edinburgh, and three in Glasgow. The deaths from diphtheria, which had been three and four in the two preceding weeks, were again four last week, and included two in Glasgow and two in Edinburgh. The three fatal cases of small-pox corresponded with the number in the preceding week, and were all registered in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 85, 87, and 68 in the three preceding weeks, rose again last week to 93, and were 20 in excess of the number in the corresponding period of last year. The causes of 25, or more than 4 per cent., of the deaths registered in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 21·3, 19·7, and 18·3 per 1000 in the three preceding weeks, rose again to 21·7 per 1000 during the week ending June 18th. During the past four weeks the death rate has averaged 20·3 per 1000, the rates during the same period being 13·4 in London and 16·8 in Edinburgh. The 158 deaths, of persons belonging to Dublin, registered during the week under notice exceeded by 25 the number in the preceding week, and included six which were referred to the principal infectious diseases, against eight, 16, and four in the three preceding weeks; of these, three resulted from whooping-cough, two from measles, and one from "fever," but not any from small pox, from scarlet fever, from diphtheria, or from diarrhœa. These six deaths were equal to an annual rate of 0·8 per 1000, the death-rates last week from the principal infectious diseases being 1·5 in London and 1·6 in Edinburgh. The deaths from whooping-cough, which had been four, nine, and one in the three preceding weeks, rose again last week to three; two fatal cases of measles were recorded last week, against five and one in the two preceding weeks. The 158 deaths in Dublin last week included 23 among children under one year of age and 37 among persons aged 60 years and upwards; the deaths both of infants and of elderly persons showed a considerable increase over the numbers recorded in the preceding week. One death from violence and five inquest cases were registered and 67, or more than two-fifths, of the deaths occurred in public institutions. The causes of five, or more than 3 per cent., of the deaths registered in Dublin last week were not certified.

THE SERVICES

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Fleet Surgeons: J. D. Henwood to the *Eagle*; T. E. H. Williams to the *President*; H. W. G. Doyne to the *President*, for R.N. rendezvous; and F. W. Stericker, to the *Mercury*. Staff Surgeon F. Fedarb to the *Doris*. Surgeon H. W. B. Shewell to the *Vivid*.

ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel C. Seymour is seconded whilst holding the appointment of physician and surgeon at the Royal Hospital, Chelsea (dated June 3rd, 1904). The undermentioned Lieutenants to be Captains: R. C. Wilson (dated May 3rd, 1904) and E. G. Ffrench (dated May 28th, 1904).

ROYAL HOSPITAL, CHELSEA.

Lieutenant-Colonel C. Seymour, R.A.M.C., to be Physician and Surgeon, vice T. Ligertwood, retired (dated June 3rd, 1904).

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Lieutenant V. Graham to be Surgeon-Captain (dated June 5th, 1904).

IMPERIAL YEOMANRY.

Glamorganshire: Colin Campbell McCall to be Surgeon-Lieutenant (dated May 23rd, 1904).

VOLUNTEER CORPS.

Submarine Miners: The Clyde Division: Surgeon-Captain J. H. G. Whiteford to be Surgeon-Major (dated June 18th, 1904).

Ride: 2nd Volunteer Battalion the East Lancashire Regiment: Surgeon Lieutenant C. W. Crawshaw to be Surgeon-Captain (dated June 18th, 1904).

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS).

The Woolwich Companies: Lieutenant E. B. Dowsett to be Captain (dated June 18th, 1904).

ARMY MEDICAL SERVICE ARMY ORDERS.

The following are extracted from the June Army Orders:—

"Matrons, Sisters, and Staff Nurses.—To be inserted after para. 140 of the Regulations for Army Medical Services:—140A. As regards medical and sanitary matters and work in connexion with the sick; the matrons, sisters, and staff nurses are to be regarded as having authority in and about their hospitals next after the officers of the Royal Army Medical Corps, and are at all times to be obeyed accordingly."

"Medical Attendance on Officers.—To be substituted for para. 531, as amended by Army Order 216 of 1901:—An officer suffering from a disability contracted in and by the performance of duty will be admitted into a military hospital at any station where the necessary special accommodation is available. An officer suffering from a disability entitling him to admission to a military hospital will be allowed such reasonable expenses of medical attendance as may be approved by the general officer commanding (on the advice of the principal medical officer), including the cost of a nurse or nurses where necessary, under the following circumstances:—(i.) if either hospital accommodation is not available, or, when available, the condition of the patient renders it impossible for him to be moved to a hospital; provided that in either case adequate treatment cannot be given by an army medical officer or civilian practitioner attending troops. The nurse or nurses must, however, be engaged by, and on the responsibility of, the army medical officer or civilian practitioner mentoned above if one is available. (ii.) When under extraordinary circumstances it has been absolutely necessary to engage the services of a specialist for such treatment as would otherwise have been carried out at a military hospital, the claim of such specialist will be referred to the War Office for settlement."

THE PAY OF CIVIL SURGEONS AND OFFICERS OF THE ARMY MEDICAL RESERVE.

It has been decided that an addition may be made to the

pay of civil surgeons or Army Medical Reserve officers temporarily employed in medical charge of the troops in camps, which may be formed in the Home District Command in this and future years, for such periods as these gentlemen are actually and necessarily required to live under canvas whilst in the discharge of their duties, at a rate of 4*s.* a day, provided that the limit of £1 a day laid down in Article 375, Pay Warrant, is not exceeded thereby.

THE WAR IN THE FAR EAST.

Briefly stated, the recent course of events has caused the position of the belligerents to be somewhat as follows. At sea three powerful Russian cruisers from Vladivostock have with much enterprise and audacity made a disastrous raid on Japanese transports conveying troops, stores, and ammunition. After having torpedoed and sunk them and evaded Admiral Kamimura's squadron they have made good their return to Vladivostock. This has dealt a serious blow to the Japanese which, had it only occurred at an earlier stage of the war, might have greatly altered the course of subsequent military events. On the other hand, the Japanese have on the land side inflicted a very serious defeat on the Russians at Telissu whose losses in killed, wounded, and prisoners—to say nothing of the guns and war material captured by the Japanese—are now estimated to have reached nearly 10,000 men. This is far in excess of the return of losses previously received from St. Petersburg, which gave about 2000 as the number. The Russian forces engaged in the battle consisted, it is said, of 42 battalions, while the Japanese army comprised 44 battalions. The latter was, however, greatly superior in artillery, having, according to the Russians, brought up more than 200 guns. The Japanese armies have so far been most successful. At Yalu they outgeneralled their Russian opponents and captured most of their artillery. At Kinchau they stormed and carried a most difficult position, and at Telissu they inflicted the heaviest losses on their enemy that have yet occurred. The Japanese have made great and most skilful and effective use of their artillery and, to say nothing of the moral effect of this particular arm of the service on troops exposed to a concentrated and withering fire, which Napoleon was among the first to recognise and to appreciate, the number of shell wounds inflicted in the course of these various engagements must have been disproportionately large. The war correspondent of the *Daily Mail*, telegraphing from Newchwang on June 20th, says that during the last 48 hours 3500 wounded passed through Tashihchao by train for Harbin from the front, and he adds that there was a general lack of medical provision for the Russian wounded. In all the circumstances of a hurried retreat following a disastrous defeat this is scarcely to be wondered at. The Russians by all accounts, however, have made their medical preparations for this war on a very large scale. It is reported that General Kuropatkin has now personally assumed command of the Russian forces in the field and will conduct their future operations. To add to the discomfort of the wounded and to the difficulties of transport and of the campaign generally the rainy season seems now to have set in with severity. The financial strain on Russia for the conduct of this war must be enormous. The losses which the Japanese have recently suffered in their sea transport service may have the effect of delaying any storming and assault of Port Arthur if such were ever really intended on their part.

The *Times* of June 22nd prints an extract from a letter just received from Tokio dealing with the work of the Red Cross Society in Japan, from which we take the following passages: "One admires the way the women of the country fall into their places as a support to the army medical service in the war. All the male *personnel* are drafted from the hospitals in the home territory and join the columns of the field army. The women nurses step into their places in the hospitals in Tokio and elsewhere and carry on the work of nursing sisters. They are all fully trained during a three years' course at hospitals belonging to the Red Cross Society or at other civil hospitals ..... There are, however, one or two English ladies here who have come out from England under the impression that they can be of some help in the war. This must embarrass the Japanese War Office very much. ..... There are thousands of Japanese women of every class of society fully trained and as expert and sympathetic as any of our own women can be. ..... Our own women might well take a lesson from them in the way they do their work, without ever considering whether they are getting *kudos* or not, and never thinking of gaining that sensational form of experience, for a woman, which consists in 'going to the front.'"

Mr. N. A. Chomyakoff has had prepared for the Court Executive Committee, instead of the sanitary train of from 25 to 30 wagons which it intended to send out to the Far East, a complete set of necessaries for 240 men. Each of the 240 sets is packed into a specially fitted strong wooden case. In each case there is packed a folding bed which if required may be turned into a stretcher and it may be stood on the floor or hung by spring hooks to the roof of the wagon. There is also a small folding chair included, together with a complete set of linen for a wounded man and other articles. All these 240 cases are arranged in one goods wagon (of a new type) which has been acquired by the committee. Its measurements allow of room for a kitchen, a sterilising apparatus, and boilers for water. The wagon is so hung on springs that it may be attached to an express train to be despatched to the seat of war where it will be unloaded and the cases arranged in 20 goods wagons, 12 in each: six beds to be stood on the floor and six to be hung to the roof and the cases to serve as tables and cupboards near the beds. The whole when required may be arranged in two hours.

Countess E. V. Schouvaloff is providing a hospital with 100 beds for the seat of war and she will maintain it at her own expense. It is estimated that it will cost £600 per month.

Correspondence.

"Audi alteram partem."

EARLSWOOD ASYLUM.

To the Editors of THE LANCET.

SIRS,—More than 50 years ago the need of an institution to provide for idiot and imbecile children was keenly felt with the result that the asylum at Earlswood was founded. Since then the institution has been open to the children of all classes: the rich have been enabled to pay for that efficient care and proper tuition which only such an asylum can provide and the poor have been relieved of a burden which weighs heavily on a hard-worked woman—the charge of a useless, perhaps noisy, uncleanly, or mischievous child. The incubus becomes even greater when the child is also an epileptic, when the scenes witnessed by the other children in the home are very demoralising. The founders of the asylum were the pioneers in this work and a great want has been supplied. To curtail the numbers of the inmates—nearly 500—would be to inflict a great social, one could fairly say a national, injury.

Now, however, a crisis has occurred in the history of the asylum owing to considerable structural defects which call for immediate attention. These, as in the case of other similar institutions, are the result of faulty work in the erection of the original buildings, in times when the supervision of local authorities was not as it is now. The asylum stands upon the Wealden clay. Practically no foundation was provided and the walls were filled with rubbish; hence, owing to successive wet seasons the whole building began to subside with the result that the walls cracked. Eminent architects were at once summoned and they insisted that, for the safety of the inmates, the repairs should be immediately taken in hand, at an estimated cost of £30,000. The funds available for these necessary operations are practically exhausted so that unless immediate substantial help is forthcoming the progress of the work must be stopped. In this case the committee will have to do what they can to make the buildings secure for the approaching winter and the cost of resuming the work next year will be greatly increased—*for it must be done*. Already a sum of £12,000 has been spent and the labour bill is still £300 a week. No legal redress is possible after such a lapse of time.

The asylum had been placed in a position of comparative financial security, but now all available securities have been sold and the institution is heavily in debt to the bankers. The public must at times experience difficulty in deciding which charitable institutions to select for their beneficence, but surely no eloquent voice is needed to plead for those who cannot plead for themselves. As the institution is open to all classes nd as no question is raised

as to denomination or even nationality the committee have confidence in appealing to the public in general. No one can deny that the immediate good done by the asylum in the past has been great, and it is difficult to estimate the potential good done to the community at large in fostering any germs of intelligence that may be found in the patients, with the result that many children who were worse than useless at home have been returned in the course of a few years to prove a comfort to the family and even to become bread-winners.—We are, Sirs, yours faithfully,

C. C. P. HULL, J.P., C.C.,
Chairman.
C. HOLMAN, M.D. St. And.,
Member of Board of Management.
H. HOWARD,
Secretary.

36, King William-street, E.C., June 18th, 1904.

"TROPHO-NEUROSIS OF THE UTERUS."

To the Editors of THE LANCET.

SIRS,—For many years I have drawn the attention of my clinical assistants at the hospital to a disordered state of the uterus which I designate as tropho-neurosis and I have so designated it because it appears to be due to some nutritive change dependent upon some nerve derangement. It is a disturbance which may manifest itself at any time during the child bearing epoch of the woman—in the unmarried as well as the married, in a woman who has borne children as well as in one who has never been pregnant. It results in the production of a more or less marked amount of version of the uterus, usually retroversion, and the symptoms noted in association with it are merely those common to other disturbances of the internal organs of generation in women. More or less pain in the back and lower abdomen, especially about the left iliac region, may be complained of and the menstrual function may be to a greater or less extent disturbed, the most characteristic change being an increase in the amount and a tendency to a too frequent recurrence of the flow, a disposition, that is, to menorrhagia and to metrorrhagia too. If conjointly there should be, as there often is, some descent of the uterus, then a "feeling of bearing down" and some frequent desire to pass urine whilst the erect position of the body is maintained may also be complained of.

The physical signs of this derangement are remarkable and it is to these more especially that I now desire to draw attention. These necessarily vary according as the whole or only a portion of the body of the uterus is affected, for being a disorder determined by some nerve state one half or even a less portion of the uterus may be disturbed. Again, the physical signs will vary according to the character of the disturbance, for the resulting change may be pronounced or somewhat ill-defined. In its most typical state the uterus loses its smoothness and firmness and displays to the examining finger a more or less reticulated sensation, a sensation very similar to that experienced by pressing with the finger the stretched chordæ tendineæ against the muscular wall of the heart. The bands chiefly felt are those which traverse the uterus more or less vertically but occasionally transverse bands are the more pronounced. The reticulation just referred to and which characterises this disorder is accounted for by the fact that whilst the physico vital state of the muscular elements is more or less extensively impaired the fibro-areolar tissue remains unaffected. It is this disturbance of the physico-vital state of the muscular tissue which determines the misplacement of the uterus, for the harmonious relationship between the uterine substance as a whole and its enveloping membrane is thereby interrupted. Elasticity and compressibility are undoubted properties of the uterus and the maintenance of the natural inclination of this viscus is to a greater or less extent dependent upon the preservation and due exercise of these. The peritoneum is an extensible and highly elastic structure and that portion of it which covers the uterus exists in ordinary circumstances and at all times in a state of passive extension. The uterine tissues, on the other hand, display resiliency and this, if efficiently maintained and opposed, serves not only to keep the serous covering of the organ passively extended but to maintain also the natural inclination of the uterus itself. Between these two, the compressor and the compressed, there exists in normal circumstances a state of mutual tension and any influence which tends to disturb this harmonious action and reaction may determine an abnormal deviation of the uterus. In the case of tropho-neurosis the resiliency of the uterine tissue becomes more or less extensively impaired, consequently version of the uterus is a common association of this phenomenon. Menorrhagia is, as I have already remarked, a frequent symptom of the disorder which results no doubt from some obscure nerve influence, and it is highly probable that it may eventually prove to be in reality a paralytic secretion.

I am, Sirs, yours faithfully,

JAMES OLIVER, M.D., F.R.S.Edin., F.L.S.

June 20th, 1904.

THE RELATION OF THE PANCREAS AND THE THYROID TO DIABETES.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of May 14th, p. 1343, Dr. James W. Allan published an article attributing the cause of diabetes to pathological changes in the pancreas and advocating the transplantation of this gland for the treatment of diabetes. May I be allowed to point out that there are also other vascular blood glands, especially the thyroid, which play an active part in the pathogenesis of diabetes? Besides numerous clinical observations which I have recorded in a monograph published in 1903 by August Hirschwald in Berlin the following fact supports this view. Comparing the thyroid glands of three dogs that had been rendered diabetic in the laboratory of Professor Minkowski in Cologne by extirpation of the pancreas with the thyroid glands of two non-diabetic dogs of about the same age I found a very considerable enlargement of the folliculi (an enormous enlargement in the case of a dog two and a half months old) and a hypersecretion of the colloid substance—i.e., symptoms of the hyperactivity of the thyroid gland. It was also very interesting to notice that in two cases the sugar entirely disappeared two days after the extirpation of the thyroid gland and that in one case there were only present traces that could not be measured by the polarimeter. I related these facts at the meeting of the Paris Biological Society held on March 19th of this year. May I also be allowed to mention that in the above monograph on the Origin of Diabetes and its Relations to the Changes of the Vascular Blood Glands I gave the detailed history of ten cases of diabetes treated successfully by the antithyroid serum of Möbius prepared by Merck and the Rödagen preparations of Burkhard and Blumenthal. Simultaneously I have also expressed the view that these preparations might give still better results if they were administered alternately with pancreas preparations containing a large number of Langerhans's islands.

The idea of Dr. Allan, however, is superior to mine. He advocates the transplantation of the whole gland. I do not see why it should be impossible to transplant the pancreas of a healthy dog to a diabetic dog. For this purpose, however, I should recommend the pancreas of young dogs which, especially in their caudal ends, as I have also found, contain a large number of Langerhans's islands. It seems to me that the whole future of human pathology belongs to the study of the vascular blood glands—i.e., thyroid, parathyroids, hypophysis, adrenals (medullary part), pancreas, spleen, ovaries, and testes. They are in near relation with the lymphatic glands and all vital functions in the animal organism, especially the metabolic processes, are regulated by the internal secretion of the vascular blood glands which are all under nervous influence and governed by the sympathetic (splanchnic) nerve.

I am, Sirs, yours faithfully,

Carlsbad, June 16th, 1904. ARNOLD LORAND, M.D. Vien.

ARTHRITISM AND CANCER.

To the Editors of THE LANCET.

SIRS,—I believe it is owing to the researches of Verneuil and his followers (Isch-Wall, &c.) during the latter part of the last century that some connexion was first shown to exist between these two morbid conditions.

When preparing a work on Diseases of the Breast (1894) I had occasion to touch the fringe of this subject and the conclusion I came to was that the members of cancer families are unduly prone to arthritic manifestations. I found evidence of an undue amount of rheumatic fever and heart disease among the brothers and sisters of mammary cancer

patients, and of 130 of these cancer patients under my own observation 11 had previously suffered from rheumatic fever and six from other rheumatic affections. My analysis showed 12 deaths from heart disease among 154 parents of breast cancer patients, or one in 12 8, whereas in the general community at that time the corresponding ratio was one in 79. From rheumatic fever my analysis showed one death in 154 parents, whereas the corresponding ratio for the community was one in 197.

As a concrete example of the connexity of these two morbid conditions I cited the case of the celebrated Bonaparte family, all the members of which were prone to arthritic manifestations. Pierre died from heart disease consequent on rheumatic fever and Napoleon III. died from stone in the bladder; two other members of the family—Jérôme and his son Napoleon—suffered from diabetes; finally, Napoleon I., his father, his brother Lucien, and his sisters Caroline and Pauline all died from cancer of the stomach. It is a long cry from such indications as the foregoing to the position lately taken up by Dr. Alexander Haig that an excess of uric acid in the tissues is the cause of cancer and it will be interesting to know the facts on which he bases his hypothesis.

Cancerous tumours consist almost exclusively of albuminous or proteid substances and it seems not unreasonable to suppose that they may be caused by excess of these substances in the body, and especially of such of them as serve as nuclear pabulum. When excessive quantities of such highly stimulating forms of nutriment are ingested by persons whose cellular metabolism is defective there may thus be excited in those parts of the body where vital processes are most active such excessive and disorderly cellular proliferation as may eventuate in cancer. However, this may be, I am persuaded that the ascertained facts justify the belief that there is a certain relation between the conditions of existence—in which alimentation plays an important part—and the incidence of cancer.

I am, Sirs, yours faithfully,

Clifton, Bristol, June 20th, 1904. W. ROGER WILLIAMS.

THE SANDGATE SCANDAL.

To the Editors of THE LANCET.

SIRS,—I have long thought it imperative to warn patients coming to me as intending convalescents at the Bevan Memorial Home at Sandgate—across the road from "the Grosvenor" and other "homes" named in your article of June 11th—against the dangers necessarily arising from indiscriminate contact with these unfortunate tuberculous patients and their dejecta. May I therefore offer you my best thanks for your able advocacy of reform in this matter, of such serious importance not only to the ordinary inhabitants of Sandgate but to convalescents in various stages of susceptibility and to the swarms of young soldiers from the neighbouring Shorncliffe camp.

I am, Sirs, yours faithfully,

ARTHUR J. HARRIES, M.D. BRUX.,
One of the honorary examining medical officers to the Alfred Bevan Memorial Convalescent Home.

St. James's-square, S.W., June 15th, 1904.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

The Failure of Hydrocarbon as a Disinfectant.—The Plague Epidemic.—Diplomas for Medical Students.—The Pasteur Institute for Madras.

THE so-called hydrocarbon, one of the by-products in the manufacture of gas, was largely recommended as a suitable disinfectant for plague. Boomed in the Southern Mahratta country it received the support of at least one local government for extensive trials. Its reputed value has been completely negatived by a series of experiments undertaken by Lieutenant-Colonel W. B. Bannerman, I.M.S., when superintendent of the King's Institute at Guindy. The results show that it is useless and that it had no effect on even the mildest form of germs in culture. The danger attending its use was sufficient to condemn it from the outset and its applicability to almost fireproof places only renders it practically useless.

The mortality from plague throughout India shows an improvement. For the week ending May 21st 28,219 deaths were recorded, as compared with 35,413 for the previous seven days. These figures are double the numbers of last year. The disease in its virulent form is almost entirely confined to the Punjab and the season's outbreak has subsided in nearly every other part of India. The Punjab recorded 24,853 deaths, as against 30,723 for the previous week. The peculiar feature of its incidence this year in the province is its more widespread character and the tendency which the outbreak has shown to be prolonged into the summer season. Other figures are: Bombay Province, 1086 deaths, as against 1653; United Provinces, 1069, as against 1303; Bengal, 215, as against 261; Rajputana, 195 as against 374; Central India, 109, as against 100; Central Provinces, 21, as against 62; Kashmir, 74, as against 221; Bombay city, 208, as against 265; Calcutta, 134; and Karachi, 77.

Now that Western medical education has become so extended amongst the natives of India and the governments of each province maintain and regulate medical schools it is about time that unauthorised institutions purporting to train medical students and granting diplomas should be abolished. The so-called College of Physicians and Surgeons of Calcutta has recently issued a list of four candidates who are said to have passed for the final M.C.P.S. and a further list of about 22 students who have been successful in the final L.C.P.S., together with a full notification of those who have gained honours. The young men who have wasted their money in this course are to be pitied. Even supposing that the diplomas were deservedly obtained in each individual case there is no criterion of any standard of medical knowledge. At the present time the variety of practitioners is hopelessly confusing and the value of the numerous qualifications in Great Britain is clear compared with the very mixed list displayed in every Indian city.

The Pasteur Institute for Madras will probably be at Coonoor. A site has been selected and only awaits formal sanction. It will be worked on the lines of the Kasauli Institute.

June 2nd.

A SHORT STATEMENT OF THE LAW RELATING TO THE SALE OF MEDICAL PRACTICES.

(BY A BARRISTER.)

THE instructive decision given by the Court of Appeal in the recent case of Robertson *v.* Buchanan, which arose out of the sale of the goodwill of a medical practice, is a decision which should be carefully noted by every medical practitioner who is a potential vendor or purchaser of a practice. The misunderstanding which arose here is an object lesson of the necessity—daily exemplified in every court in the land—of parties to a contemplated contract arriving at a clear understanding before, and not after, they set their seals to their agreements. In this case of Robertson *v.* Buchanan the material facts were briefly as follows. In 1901 the defendant sold the goodwill, &c., of his practice in Brixton to the plaintiff for the sum of £750 and at the same time covenanted that he would "not for a period of ten years computed from the 14th Feb. last, except with the consent of the said J. R., *set up in practice* as a physician and surgeon, either alone or jointly with any person whomsoever, within the distance (as the crow flies) of two miles of 337, Brixton-road." In 1903 the defendant started a practice at a house in Vauxhall-bridge-road, which was outside the prescribed radius. The plaintiff thereupon claimed an injunction to restrain the defendant from setting up in practice in breach of the above-mentioned covenant and in support of his case relied on two instances in which he alleged the defendant had solicited two old patients. The defendant denied that he had solicited any of his old patients; he had only attended one at her express written request and the other was a personal friend on whom he happened to call and at her request he gave her a prescription and received no fee for doing so. The defendant also deposed that at the time of the sale of his practice he offered to agree not to set up in practice within two miles if the plaintiff agreed that he might visit patients within the two miles if requested without restriction, and the defendant alleged that he expressly pointed out to the plaintiff that under the proposed arrangement he should be entitled to attend the plaintiff's next-door neighbour, if requested,

though he could not have a surgery within the radius. The plaintiff, however, denied this latter part. Upon these facts the judgment of the Court of Appeal, in short, was: It is our duty to construe the covenant which the parties have agreed to. The words "set up in practice" do not mean the same thing as "practise." If the words had been "not to practise" it would have been very difficult, if not impossible, for the defendant to justify attending a single patient for remuneration within the limits named. On the evidence before us there has been no breach of the covenant not *to set up* in practice. On the other hand, the Court said there would be a breach of the covenant if the defendant were to drive about daily in the district, so as to fall in with those who are well acquainted with him, the result being possibly that he would speedily get back the whole of his former patients by informing them that he was living just over two miles from his old place.

The same legal principles apply to the sale of the goodwill of a medical practice as to the sale of the goodwill of any kind of business. In the leading case of Trego *v.* Hunt cited in the above case it was decided by the House of Lords that where the goodwill of a business is sold (without further provision) the seller may set up a rival business, but he is not entitled to canvass the customers of the old firm and may be restrained by injunction from *soliciting* any person who was a customer of the old firm prior to the sale to continue to deal with the seller or not to deal with the purchaser. The same principle is applicable to the case where a person has been taken into partnership on the terms that on the expiration of the partnership the goodwill of the business shall belong solely to the other partner.

The case of Rogers *v.* Drury, tried in 1887, was rather like the above case of Robertson *v.* Buchanan, but there the judgment of the court was in favour of the purchaser of the practice, probably on account of the words set forth below in italics. There the agreement for the sale of the practice provided that the vendor would not *practise* or reside within a given radius *or otherwise directly or indirectly enter into competition with the purchaser*. The vendor after the sale was called in by patients resident within the radius and visited them. He did not, however, solicit such patients and they stated that they would in no event have called in the purchaser. The court held that the competition contemplated by the agreement was not confined to *active competition* and that the acts of the vendor constituted an infringement of the agreement, and it granted a perpetual injunction. If an assistant agrees with his employer that he will not practise within a certain radius after leaving his employer he is bound by his agreement much in the same way as is a vendor of a practice. The somewhat complicated case of Palmer *v.* Mallet relates to the right in such a case of an assistant to enter the employment of one of two partners after they had dissolved partnership. The facts were: M. became assistant to H. and P., surgeons at N., and entered into a bond which recited that he was taken into their employment on condition that he should "not at any time hereafter directly or indirectly and either alone or in partnership with, *or as assistant* to, any other person or persons carry on the profession of a surgeon" in N. or within ten miles thereof. Disputes between the partners arose, the partnership was dissolved, and both partners continued to practise in N. The partner H. engaged M. as his assistant. P. brought an action to restrain M. from acting as such. It was held that as the agreement recited in the bond was for the protection of the business carried on by H. and P. and they had in the business a *joint* interest during the partnership and *several* interests in the event of a dissolution the agreement must be taken to be several as well as joint, and so P. could sue alone for a breach of it. It was also held that there had been another breach of the agreement here, for a person acting as a surgeon was carrying on the profession of a surgeon although he acted as salaried assistant to a surgeon who carried it on for his own benefit.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Alake of Abeokuta at the School of Tropical Medicine.

THE Alake arrived in Liverpool from London on June 9th and among other places of interest paid a visit to the Liverpool School of Tropical Medicine (Johnston laboratories). Professor Rubert Boyce, Professor C. S. Sherrington, and Dr. A. S. F. Grünbaum conducted the distinguished visitor and his staff through the laboratories where the important research work is being carried on in connexion with the School of Tropical Medicine. The Alake was much interested in the efforts which are being made to cope with sleeping sickness and addressed a few words of sympathy to two Congo natives infected with the disease who are now under the supervision of the school authorities. Professor Sherrington had arranged an experiment for the edification of the Alake in which the heart of a cat was made to beat for some time after the animal's death by the infusion of blood through the detached organ. The practical application of this experiment has its value in demonstrating the possibility of resuscitating a patient who may have succumbed under the administration of chloroform. The Alake was particularly interested in this experiment. Dr. Grünbaum, the director of the Cancer Research, also explained to him the efforts made to investigate the causes of that disease. The Alake was profoundly impressed by his visit to the University and by the importance of the work carried on in the Johnston laboratories, some of the fruits of which he hopes to see in the improved condition of his own country so far as health and sanitation are concerned. He afterwards visited the corporation sewage farm at West Derby under the guidance of Alderman Menlove, the chairman of the health committee.

The Liverpool School of Tropical Medicine.

The chief business discussed at the meeting of the committee of the School of Tropical Medicine held on June 14th was the question of the best means of raising further funds for the carrying on of the work of the school. It was decided to make a strong appeal to the public in that direction. For the study of trypanosomiasis alone, and quite apart from the expedition despatched by the school to Senegambia on other research work, the committee had already disbursed £3000, and it will be called upon to spend at least £2000 a year on the work if it is to be continued in the future. If the investigations are to be completed they should be continued on similar lines for at least two years. Within the last few days four more cases of sleeping sickness have arrived in Liverpool under the auspices of the School of Tropical Medicine.

The West Derby Guardians and the Accommodation for Harmless Lunatics.

A joint committee of the unions and the asylums board met early in the year and reported that it considered that accommodation should be provided for patients of a harmless character at a very much less cost in the construction of buildings and general provision than the guardians had now to provide for the other class of lunatics. That report was unanimously considered to be a move in the right direction by the Lancashire asylums board. Two gentlemen were appointed to interview the Commissioners in Lunacy on the subject. Only one of the commissioners was present at the interview and he did not appear to be favourable to the suggestion that separate provision should be made for harmless lunatics. It was the opinion of the Lancashire asylums board that the guardians should not stop at that point and that if necessary an appeal should be made to the Home Secretary. Mr. J. Birch, who brought the matter forward at the West Derby board of guardians, said that the feeling of the asylums board was with the joint committee in the matter, which, he thought, would be pushed forward and he hoped sooner or later that separate accommodation for harmless lunatics would be an accomplished fact.

The Health of Bootle for 1903.

The report of the medical officer of health of Bootle (Mr. T. W. N. Barlow) for the year 1903 contains the vital statistics for the year and the details of the work carried out by his department. The report states that the sanitary condition of the borough is, on the whole, satisfactory and this no doubt contributed largely to the non-success of the recent application by the corporation of Liverpool to Parliament to confirm the order of the Local Government Board that Bootle should be included within the boundaries of the city of Liverpool—a fact emphasised by the remarks of the chairman in giving the decision of the Parliamentary Committee. The estimated population of Bootle in June, 1903, was roughly 60,800. The area of the borough is 1576 acres. The number of children born during 1903 was 2010—1043 males and 967 females.

The birth-rate was 33·05 per 1000. The total number of deaths during the year was 1108 (597 males and 511 females), being equal to a death-rate of 18·2 per 1000. The infant mortality was 161. The rate of infant mortality in 1900 was 204. The diminished rate of infant mortality was accounted for in a large measure by the cold and wet summer of 1903. In the early months of the year small-pox, already prevalent in Liverpool, continually spread into Bootle, and the cases notified were fairly numerous during the first four months, but owing to the precautions taken it never got out of control. In June the last case was discharged from hospital. The infection in 56 instances was traced to previous cases; in 66 cases the origin was undiscovered. Mr. Barlow stated that the protection afforded by vaccination only lasts for a certain time, neither, in fact, does an attack of small-pox confer immunity against the disease for ever. One case of mild small-pox was that of a man who had had the disease in infancy. To complete the protection revaccination is necessary. The number of scarlet fever cases notified was 353, an increase of 32 over the year 1902. There were 33 cases of diphtheria notified; 61 cases of typhoid fever were notified, whilst there was not a single case of typhus fever. Only two children died from measles, as against 46 in 1902. 1151 visits were made to meat, fish, fruit, and ice-cream shops during the year, chiefly during the summer. Shops where food is prepared for consumption have now been placed on the workshop register and are inspected as workshops. The dairies, cow-sheds, and milkshops have been regularly inspected throughout the year. All the cows in the various shippons have been examined periodically by the veterinary surgeon and much benefit has resulted from this procedure. All animals showing distinct signs of tuberculosis of the udder and all those animals showing doubtful signs which have given a positive reaction to the tuberculin test have been removed from the district without delay.

The Royal Albert Asylum, Lancaster.

Through the munificence of Mr. Herbert L. Storey, the high sheriff of Lancashire, a fine block of industrial schools and workshops has been erected as an annexe to the Royal Albert Asylum. This institution, which is for the benefit of the seven northern counties, has found some of its greatest benefactors in its own immediate neighbourhood. At the invitation of the central committee Mr. Storey will open the new building on June 24th when Lord Muncaster, the Lord Lieutenant of Cumberland, as one of the trustees of the asylum, will receive the gift. The ceremony will be followed by a public luncheon for ladies and gentlemen in the Winmarleigh Hall, at which Sir John Hibbert, the chairman of the central committee, will preside.

June 20th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

Alcoholic Excess and Insanity.

Dr. J. G. Havelock, physician-superintendent of the Montrose Asylum, in his report to the managers of that institution for the past year makes the following interesting remarks on the causes of insanity: "There is probably no table in the statistics appended to these reports which is of a more speculative character than that stating the probable causes of insanity. During the year under review I have specially investigated the etiology of each admission and find that in a considerable number the absence of a complete history of the cases makes it impossible to assign an exact causation. In the cases where a complete and visible cause is apparent to the informant—such as intemperance in drink or epilepsy—this is always stated. On the other hand, there is a great temptation to class all cases where excessive drinking was the direct result of the nervous breakdown as if they were caused by drink. Without taking this last source of fallacy into account, but including all these cases where any history of alcoholic excess could be obtained, I find that only in 12 cases, or 8 per cent. of the admissions, could this be stated as the cause of the mental disorder. This is, I think, specially worthy of mention, as in some of the asylums of Scotland drawing patients from the large towns excessive drinking has been credited with causing almost 50 per cent. of the admissions. Many theories may be advanced to explain this striking difference in the statistics of this asylum and the others just referred to. There may be far less excessive drinking in the burghs and rural districts from which we draw our patients, or it may be that the nervous system of the town-dweller is less able to resist the baneful effects of the alcoholic poison. The natives of the shires of Forfar and Kincardine are undoubtedly a hard-headed section of the population, and I am constantly surprised to see what enormous quantities of alcohol many individuals can consume over long periods of years without showing obvious morbid effects on the nervous system, far less actual insanity. It is therefore necessary to state in the most emphatic way that the experience of Montrose Asylum is that in only a small proportion of the inmates—certainly not more than 10 per cent.—has insanity been produced by alcoholic and other vicious excess. I have no desire in any way to minimise the disastrous effects of alcoholic excess on a large section of the population and the misery, vice, and improvidence so produced on the present and succeeding generations; but the insane have had enough unmerited opprobrium to endure in the past without being stigmatised to-day as if they were in the main drunkards and steeped in all manner of vice. Those who are hereditarily predisposed to mental disorders must be strictly temperate in the use of alcohol; the majority, perhaps, should keep on the safe side and abstain entirely. And it should be borne in mind that the individual who asserts that in his family there is absolutely no history of any form of insanity usually speaks with a very limited knowledge of his pedigree."

June 21st.

IRELAND.

(FROM OUR OWN CORRESPONDENT.)

Epidemic of Small-pox in Belfast.

SMALL POX has assumed an epidemic form in Belfast and the surrounding districts, there being now 37 cases at Purdysburn. This epidemic of small-pox has—as was expected by everyone with the least foresight—found the corporation still without the long-talked-of infectious diseases hospital at Purdysburn. The temporary accommodation there has been exhausted by fewer than 30 patients and now the public health committee has been obliged to sanction the erection of tents for the transfer of the convalescent cases. A curious situation has arisen through the utter want of foresight of the Belfast health authorities, as Lisburn and other rural district councils adjacent to Belfast demand that the Belfast Isolation Hospital should take in any small-pox cases arising in their areas provided they are willing to pay. The whole situation demonstrates the wilful neglect of the corporation which should have had an infectious diseases hospital ready years ago. Now an epidemic of small-pox arises and the authorities are in a helpless muddle, with a small isolation hospital at Purdysburn (the situation of which every sanitarian would condemn from its proximity to the helpless patients in the adjacent asylum), the accommodation of which is already exhausted, and with a separate building for "contacts" miles away at the entrance to the Lough where there are now about 100 suspects. There is no city in the three kingdoms in which the public health department is still so much behind the times as is Belfast in respect of dealing with infectious disease. The epidemic is of a severe type and no good is done by allowing it to be thought mild with the idea of allaying public feeling; it is becoming more widespread and to cope with it energetic means are needed.

June 21st.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Gastro-enterostomy for Hæmorrhagic Ulcer of the Stomach.

HAVING some experience of gastro enterostomy in cases of hæmorrhagic ulcer of the stomach, M. Ricard considers that it ought not to be performed while hæmorrhage is actually in progress, for the operation would be both dangerous on account of the liability to septic infection and useless as it is often impossible to find the bleeding vessel. At a meeting of the Surgical Society held on June 9th M. Ricard advanced various arguments in support of his views, saying that, in his opinion, the operation ought not to be performed on account of the ulcers themselves as these ulcers often healed under

medical treatment. Operative measures ought to be reserved for ulcers which either did not heal under such treatment or gave rise to frequent hæmorrhages. M. Ricard formerly excised the ulcer but he has now abandoned this practice because of the remarkable loss of substance which ensued; this loss of substance led to contraction and deformity of the stomach, and might eventually necessitate gastro enterostomy, an operation which it was better to perform in the first instance. He considered that excision of the ulcer was only indicated when it was situated near the pylorus and when pylorectomy was possible. After gastro enterostomy the functions of the stomach continued to be performed adequately, the ulcers healed well, and the patient was put in the way of recovery, but the necessity of medical treatment must be kept constantly in mind.

Impaction of a Tooth-plate in the Œsophagus.

At the same meeting of the Surgical Society M. Tuffier read an account of a case under the care of M. Guibal in which a patient had swallowed a large tooth-plate during sleep. The foreign body, which gave rise to no subjective symptoms beyond a slight difficulty in swallowing, was located by means of a metallic œsophageal sound at a distance of 26 centimetres (10½ inches) from the dental arches, almost on a level with the fifth cervical vertebra. The results of radioscopy were negative and radiography gave only a blurred picture. After a very cautious attempt at extraction by the natural passages with the aid of long curved forceps M. Guibal immediately performed external œsophagotomy. The tooth-plate, one of the hooks of which was fixed in the wall of the œsophagus, was extracted without difficulty, the œsophagus was sutured in two layers, and drainage was provided for. Recovery took place without any incident beyond the formation of a minute œsophageal fistula which healed rapidly. M. Tuffier, commenting on the case, said that when foreign bodies of irregular outline were impacted in the œsophagus it was wrong to make prolonged or energetic attempts to extract them by the natural passages and that external œsophagotomy ought to be performed without much delay.

Treatment of High Myopia by Extraction of the Crystalline Lens.

At a meeting of the Academy of Medicine held on June 7th M. Lagrange gave the results of his experience of treating high myopia by extraction of the transparent crystalline lens as recommended by Vukala and Vacher. He has performed this operation 20 times on patients who have been under his observation for periods varying from two to eight years. It produced no ill effects, for he had never met with either detachment of the retina or aggravation of lesions of the fundus. Below 17 dioptres it was better not to interfere but with myopias of this amount and upwards extraction of the transparent crystalline lens rendered very great service in the improvement of vision.

Infection of a Wet Nurse by a Syphilitic Infant.

Some months ago a woman living in the country received from the Assistance Publique an infant two months old to be suckled. Not long afterwards the infant showed symptoms of syphilis and was weaned. The woman who had been suckling the infant soon displayed initial manifestations of syphilis and claimed compensation to the extent of 10,000 francs (£400), alleging that the Assistance Publique had failed to have the infant properly examined before sending it away as a careful examination would have shown that it was syphilitic. The court awarded the woman 2000 francs (£80) and an annual sum of 300 francs (£12).

Separate Collection of the Urine from Each Kidney.

At a meeting of the Academy of Medicine held on June 15th M. Tuffier discussed the value of the information supplied by the examination of the urine collected separately from each kidney. The urine was formerly obtained by passing a sound into each ureter but the process was now greatly simplified by means of the apparatus of M. Luys which enabled the bladder to be divided by an artificial vertical partition between the orifices of the ureters, so that the urine coming from each was collected by itself. By a comparative examination of the two urines it was easy to ascertain whether there was any difference in the functional activity of the kidneys and to recognise an abnormal condition of either kidney when only one was affected. M. Tuffier said that the information gained in this way had only a comparative value. The mixed urine ought always to be examined for several days before resorting to separation and circumspection was necessary in interpreting the ultimate results. The kidney which supplied more urine than its neighbour might in reality be the affected one; in order that polyuria might not be overlooked the specific gravity of the urine ought to be taken and the amount of solid matter contained in it estimated by cryoscopy. The nature and exact position of abdominal tumours were often uncertain and in distinguishing between tumours of the liver and the kidney or the spleen and the kidney, as the case might be, a diagnosis could not be always made by separation of the urine, for interference with the circulation due to the pressure of a non-renal tumour might have an effect on the kidney and modify the composition of its secretion. M. Tuffier added that bacteriological investigations were for the most part incompatible with separation of the urine but the existence of pus observed on one side only had often shown that an abnormal condition was limited to one kidney and had thereby indicated the side on which an operation might be attempted.

June 21st.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Sanitation along the Isthmus of Panama Canal Route.

Colonel William C. Gorgas of the Medical Department, United States army, who is to have charge of the medical force in connexion with the construction of the Panama Canal, has returned to the United States and is engaged in perfecting his plans for the purification of the territory through which the canal will run. The projected route of the canal is the strip of land between the cities of Panama and Colon, a distance of about 50 miles. The route, from Colon to the Pacific terminal, according to Colonel Gorgas, is through a picturesque mountainous country, which is well drained, the swampy ground along the course of the rivers Chagres and Rio Grande being in extent about the same as in the case of a similar river in the hilly regions of New York. As to the health conditions of this region Colonel Gorgas says that generally speaking they are much the same as of most tropical countries. At the present time the infection introduced by the French labourers has to a great extent disappeared and the present population is not subject to the same high rate of mortality which the French workers experienced. Including the two cities of Colon and Panama there is at the present time a population of about 40,000 people along the canal strip. The great majority of these people have malaria and should a large body of foreign labourers be sent to the isthmus at this time they would eventually be infected in the same way as the French were. To correct these conditions a year will probably be allotted to the medical force and sanitary engineers before any large body of labourers is thrown into the isthmus. With regard to the yellow fever problem no trouble is anticipated on that score. The same principles will be applied to the isthmus of Panama which were so successful in Havana. In order to fight malaria the idea of Colonel Gorgas is to establish some general system by which all of the infected population can be brought under the influence of small daily doses of quinine, as was so successfully tried in South Africa. Mosquito breeding-places will be destroyed and any man on whose property are found the larvæ of mosquitoes will be punished. About 200 medical men will be needed along the line of the canal to care for the sick. The sanitation problems, such as street cleaning, sewerage, and waterworks, will be solved in the same way as in American cities.

Physicians' Building in New York.

The old Madison Avenue Hotel has been converted into a building to be devoted exclusively to the use of physicians. The building was formally opened in the beginning of May. It contains 55 suites of offices. The most stringent regulations have been adopted with regard to tenants. Only physicians of unquestionable standing can gain admittance. All applications for offices must be submitted to a committee of lessees of suites and no other professional or commercial enterprise can secure tenancy in the building.

Street Transportation in New York.

The report of the New York State Railroad Commission recently published gives the following figures. For the year

ended Feb. 29th 1,036,834,773 passengers were carried on the surface and elevated roads of the five boroughs constituting the city of Greater New York, an increase of 65,075,964 over the preceding year. This was a total car mileage of 197,826,719, an increase of 18,220,741. Surface lines carried a total of passengers of 397,644,829. The elevated lines in Manhattan carried 273,133,242, the gain being 37,318,852.

Plans for a New Bellevue Hospital.

The plans for the erection of a new Bellevue Hospital in New York city which have been sent in provide for buildings to cost $11,000,000 (£2,200,000).[1] Accommodation for 3000 patients will be provided, as well as suitable rooms for the medical and nursing staff and hospital helpers. If these plans are finally accepted $200,000 (£40,000) will be needed to begin the work and about $1,000,000 (£200,000) will have to be appropriated every year until the hospital is completed.

June 10th.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Bubonic Plague.

FRESH cases of bubonic plague have been reported from Sydney (two cases) and Brisbane (two cases). The Sydney cases were from the infected area and occurred in persons employed at produce stores.

Sanatoriums for Consumptives in Victoria.

It has been proposed to convert the buildings of the Viticulture College at Rutherglen, Victoria, into a sanatorium for consumptives. The site is considered suitable as to climate and soil and the building is isolated and at a safe distance from population. Of course, the residents of Rutherglen protest and in consequence the proposal has been postponed.—The residents of Heidelberg and the board of health are still protesting against the erection of the Kronheimer wing for consumption at the Austin Hospital for Incurables at Heidelberg but the committee of the hospital is going on with the building.

Notification of Tuberculosis.

A deputation waited on the Minister of Health in Victoria recently to point out the difficulties experienced by municipal councils in enforcing the provisions of the Health Act with reference to tuberculosis. The Minister replied that he was inclined to introduce a short amending Bill to render the provisions of the Act in this respect less stringent.

Friendly Societies and the Profession.

The fourth annual session of the Australian Natives' Association was opened at Sydney on April 5th. The President in his address referred to the difficulties that had arisen with the medical profession and stated that "we are continually faced with the difficulty of securing satisfactory medical officers." He concluded by moving that a Royal Commission should be appointed to inquire into the arrangements of the medical profession and the friendly societies generally, which was carried. A further motion was carried that—

> This conference, in view of the conciliatory attitude adopted by the Australian Natives' Association from its inception towards the British Medical Association in offering to pay rates higher than many friendly societies recognised by them, agrees to a wage limit of £200 for benefit members and payment of rates on the basis of old-established and leading friendly societies and the abolition of medical attendance to honorary members, and that the conference, in the interests of its own preservation and in the broad principle of equity and honest dealing, refuses to go further.

—At the opening of the Druids' Grand Lodge the Grand President said that in the ranks of the societies there were many persons who had no business there, men "of position and means who did not need, and who would probably never avail themselves of, the benefits accorded to the sick poor but who join simply for the sole purpose of furthering their own particular views." To the presence of these persons the Grand President ascribed the existence of the feud between the British Medical Association and the friendly societies.—In Melbourne the relations between friendly societies and the profession have been furnishing subject matter for a long newspaper correspondence giving both sides of the question, the lodge surgeons claiming that the societies are abused by well-to-do people and pay the surgeons too little. The lodges admit that they have a few well-to-do members but that these do not, as a rule, claim medical benefits. They object, however, very strongly to a wage limit and point to the competition among medical men to obtain positions as lodge surgeons as the best test of the way in which the profession is treated. —At Maldon, Victoria, the medical officer of a friendly society refused to attend a lodge member while the member was also under the treatment of a quack herbalist. The member made a complaint against the surgeon. After full consideration the lodge upheld the action of the medical officer.

The Balmain Hospital.

The difficulty at the Balmain Hospital, New South Wales, brought about by the resignation of the honorary staff as its members would not meet Dr. P. J. Kelly, the paid medical officer, has been settled by the appointment of five new members who applied for the vacant positions. Their names are: Dr. C. A. Patrick, Dr. F. Calder, Dr. J. L. Fenton, Dr. W. Cortis, and Mr. T. B. Clune.

Infantile Hygiene.

The report of the Birth-rate Commission referred to the lack of knowledge of the treatment of infants shown by girls. The Minister for Education in New South Wales after inquiring into the subject has appointed Dr. Mary Booth, demonstrator of anatomy at the University of Sydney, as lecturer in the education department on infantile hygiene. She will give a course of lectures to the teachers in the training college and to the older girls of the public schools.

Hospital Affairs.

The recent annual meeting of the Royal Prince Alfred Hospital, Sydney, was interesting as being the twenty-first since the institution was opened, and as Sir James Fairfax observed in moving the adoption of the report, it had just come of age. Referring to the work done, he said that when the hospital was opened on Sept. 25th, 1882, the available bed accommodation was 146; now it was 236. During the first year of the hospital's existence 1069 in-patients were admitted, or almost exactly one third of the number treated this year; but it was significant of the improved methods of hospital work that in that year only 490 patients were discharged cured as against 2063 last year; while 283 were discharged relieved, as against 623; and the deaths numbered 127 against 346. The past year had, he said, been one of steady progress, medically and otherwise. The accommodation had again been taxed to the utmost and the number of surgical operations performed was nearly double what it was ten years ago.—The twenty-fourth annual meeting of the Sydney Hospital for Sick Children was held on April 12th. The report stated that during 1903 there were 616 patients admitted into the general hospital and 293 admitted into the diphtheria cottage. There were 75 deaths in the general hospital and 48 in the diphtheria cottage. In the out-patient department there were 21,025 attendances of 5494 patients. The death-rate in the general hospital was 11·4 per cent., as against 10·4 per cent. last year. In the diphtheria branch 303 patients were treated this year, as compared with 188 last year; while the death-rate was 15·5 per cent., as against 12·02 per cent. in 1902. The following members of the honorary medical staff, whose term of office had expired, were re-elected: Mr. C. P. B. Clubbe, honorary surgeon; Dr. E. J. Jenkins, honorary physician; and Dr. C. Gordon MacLeod, honorary ophthalmic surgeon.—At the Melbourne Hospital the administration of anæsthetics is being considered by the committee and the medical staff. It is alleged that deaths from chloroform are too frequent and rules are being framed with the object of substituting ether for chloroform as the general anæsthetic and of restricting the administration of chloroform to special cases and by the honorary anæsthetists.

Charges against a Medical Man.

Dr. F. W. Marshall of Sydney was charged at the Central Criminal Court with having procured criminal abortion on a young woman who was the chief witness. The jury returned a verdict of "Not guilty." He was subsequently charged with the same offence in the case of a married woman. The jury in this case, after being locked up all night, failed to

[1] Vide THE LANCET, May 28th, 1904, p. 1533.

agree and the accused was remanded to the next sittings of the court.

Obituary.

Mr. Herbert Blaxland, medical superintendent of the Hospital for Insane at Gladesville, died very suddenly on April 11th from renal hæmorrhage. Mr. Blaxland entered the public service in 1879 and was for some years medical superintendent at the Callam Park Hospital for Insane. He was universally respected for his ability and loved as a man, and his loss will be keenly felt, especially in the lunacy department. He was only 52 years of age and looked forward to many years of usefulness in the service to which he had devoted the best years of his life. The funeral was very largely attended by representative men, not only in the profession and the service but also in all classes of the community. He has left a widow and four children.

May 10th.

Obituary.

LOUIS LEOPOLD JENNER, M.A., M.B., B.CH. OXON., M.R.C.P. LOND.,

FORMERLY SUPERINTENDENT OF THE CLINICAL LABORATORY, ST. THOMAS'S HOSPITAL.

IT is with regret that we announce the death, at the early age of 38 years, of Dr. Louis Jenner, fourth son of the late Sir William Jenner, Bart., G.C.B., late President of the Royal College of Physicians of London. Dr. Louis Jenner was up to the time that he was taken ill engaged in working out the nature of the toxins of the bacillus typhosus at the Lister Institute of Preventive Medicine. There is little doubt that it was in connexion with this work that he contracted the attack of enteric fever to which he succumbed.

Educated at Marlborough School, he matriculated in 1884 at Trinity College, Oxford, where he began his medical career. From Oxford he went to St. Thomas's Hospital, London, in 1890, where, after holding the post of house physician to Dr. J. F. Payne in 1894, he became in 1896 demonstrator of morbid histology and in 1897 superintendent of the then new clinical laboratory. He obtained the degrees of Bachelor of Medicine and of Surgery at Oxford in 1894 and the Membership of the Royal College of Physicians of London in the following year. Devoted always to the scientific side of his work, it was to pathology and later to bacteriology that he paid special attention and after he was qualified he spent much time in the study of these subjects in the laboratories both in England and on the continent. It was under his care and guidance that the planning and fitting up of the clinical laboratory at St. Thomas's Hospital were carried out and it was during his term of office as superintendent there that he especially studied the morbid histology of the blood and published his now well-known method of staining.

After resigning the post of superintendent to the clinical laboratory in 1900 in order to devote himself to the study of bacteriological chemistry, he worked first at the Pharmaceutical College in Bloomsbury-square and afterwards, until his death, at research work at the Lister Institute. From time to time he published papers on bacteriology in the medical journals, one of which, entitled "Bacillus Coli Capsulatus: a Study in Virulence," attracted considerable attention. The excellent article in Allchin's "Manual of Medicine" on the Blood under Normal Conditions is also from his pen. To science, to the advancement of which in his special line he gave himself up with whole-hearted devotion, the loss by his death is great indeed; to those who were intimate with him and by whom his friendship was so highly valued the gap that is left is greatest of all. He was buried on June 6th at Durley in Hampshire close to the spot where his father's remains lie.

EDWARD JAMES ALFRED TRIMMER, M.A. CANTAB.

OUR obituary columns are as a rule restricted to notices of the lives and works of members of our profession but there are occasions when an exception should prove the rule, as, for instance, in the case of those whose life-work has been done in conjunction with, or in the service of, medical men. The death which we regret to announce, after a few months' illness, of Mr. Edward Trimmer, for many years secretary of the Royal College of Surgeons of England, in his seventy-eighth year, furnishes such an occasion.

Edward James Alfred Trimmer was born at Turnham-green on Jan. 19th, 1827. He was the son of the Rev. Edward Trimmer and a great-grandson of Mrs. Sarah Trimmer the authoress. He commenced his education at a school at Hammersmith but subsequently went to the school at Putney kept by his father and remained there until the age of 15 years, when he was sent to the Rev. Mr. Greenlaw's school at Blackheath. From there Mr. Trimmer went to Jesus College, Cambridge, where he took his Bachelor of Arts degree, after which for a short time he studied geology under his cousin, Mr. Joshua Trimmer. For a short time he assisted at his father's school, a well-known and successful establishment, from which his father retired in 1856. About this time Mr. Trimmer obtained a supernumerary clerkship at the India Office and became private secretary to Sir John Campbell. He was, however, too old to be taken on to the permanent staff, so when he heard that his old friend Edmund Belfour was in want of assistance at the Royal College of Surgeons of England he was glad to join him in the capacity of assistant secretary. In this position he remained until 1865 when on Mr. Belfour's death he was appointed secretary of the College. The training that he had received in the India Office was no doubt of great benefit to him, for after joining the College he rapidly mastered the business of the office and the system of examination and until his retirement served the College faithfully and zealously.

In the year 1872, when an attempt was made by the universities and corporations in England to bring about a voluntary examination for a one-portal system of qualification, Mr. Trimmer was appointed joint secretary with Dr. (now Sir Henry) Pitman to the committee of reference, and continued to conduct the business of this well-intended attempt at reform until, by the withdrawal of one of the representatives in 1879, the scheme fell through. Looking back there can but be regret for its failure when apparently on the threshold of accomplishment, for what trouble, competition, and endless discussion the successful institution of such an examination would have saved the present generation. In the dental profession Mr. Trimmer was always interested and he was undoubtedly for many years the greatest authority on dental examinations and curricula, for, of course, the Licence in Dental Surgery of the Royal College of Surgeons of England was for many years the only dental qualification in the United Kingdom. During the later years of his official life Mr. Trimmer was relieved of much of his work and on the establishment of the Conjoint Board he ceased to have any connexion with the examinations. He retired on a pension in the year 1901, having served the College for a period of 42 years.

It has been said that Mr. Trimmer utilised his position to control the policy of the College but this was not the case. No doubt his sound knowledge of precedent and of the history of the College caused his opinions to be sought by presidents and councillors but he studiously refrained from endeavouring to side with parties in medico-political questions and in all cases he conscientiously acted to the best of his judgment for the welfare of the College to which he was so much attached. In many ways Mr. Trimmer was an exemplary secretary, genial, energetic, firm, and well versed in the traditions as well as in the by-laws and charters of the College. He was, however, somewhat of a martinet with students and perhaps rather slow to move with the age. As a young man he was a good cricketer and played in his college "eleven" at Cambridge. For many years he spent his summer holiday abroad with his friend, Valentine Hill, and he was often consulted by others on the subject of their proposed trips—he was indeed a veritable walking guide to Switzerland, the Engadine, and the Tyrol. As a Freemason, too, Edward Trimmer was well known. In private life Mr. Trimmer was a charming companion, with a great sense of humour and full of anecdotes relating to the College, its Council, and members of the profession. He married late in life and during his last illness has been devotedly nursed by his wife who in her loss will receive the sympathy of the many medical men to whom her husband was so well known.

Medical News.

SOCIETY OF APOTHECARIES OF LONDON.—At examinations held in June the following candidates passed in the subjects indicated :—

Surgery.—C. C. Bernard (Section I.), Royal Free Hospital; L. S. Dudgeon (Sections I. and II.), St. Thomas's Hospital; J. A. Renshaw (Section II.), Manchester; N. O. Roberts (Section II.), Cambridge and St. Mary's Hospital; G. W. Rogers (Sections I. and II.), Cardiff and St. George's Hospital; and J. P. B. Snell (Section II.) Middlesex Hospital.
Medicine.—P. S. Cooke, Charing Cross Hospital.
Forensic Medicine.—J. P. E. Henery, St. George's Hospital; E. R. Neukirch, Copenhagen; and E. E. Tucker, Royal Free Hospital.
Midwifery.—P. F. Howden, Bristol; E. R. Neukirch, Copenhagen; E. E. Tucker, Royal Free Hospital; and R. W. L. Wood, Leeds.
The diploma of the Society was granted to the following candidates, entitling them to practise medicine, surgery, and midwifery: L. S. Dudgeon, J. A. Renshaw, N. O. Roberts, and G. W. Rogers.

UNIVERSITY OF OXFORD.—Dr. George A. Gibson has been appointed an examiner in medicine.—The announcement made in THE LANCET of June 11th, p. 1694 (taken from the *University Gazette*), of the election of a representative on the General Medical Council was erroneous. No election had taken place.—In a Congregation held on June 16th the following degrees were conferred :—

Doctors of Medicine.—Gustave Isidore Schorstein, M.A., B.M., Christ Church, F.R.C.P.; and Arthur Edwin Boycott, M.A., B.M., Brasenose.

At examinations held recently the following candidates were successful :—

FIRST M.B. EXAMINATION.

Organic Chemistry.—M. Bates, St. John's; S. Nockolds, Keble; and W. W. Wells, Merton.
Materia Medica and Pharmacy.—M. Baines, Exeter; M. Bates, St. John's; C. N. Binney, Corpus Christi; L. C. Brigstocke, Jesus; A. W. Burnyeat, Queen's; H. G. Butterfield, Wadham; R. Evans, Jesus; N. Flower, Exeter; P. H. C. Fowell, St. John's; M. H. Nash, Exeter; S. Nockolds, Keble; E. A. Ramsden, A. H. Savage, and P. T. Spencer-Phillips, New; and B. W. Stone, Brasenose.
Anatomy and Physiology.—H. H. Carleton, Keble; E. A. Cockayne, Balliol; E. P. Cumberbatch, Keble; M. Davidson, Trinity; M. W. Flack, Keble; N. Flower, Exeter; J. F. Hornsey, Wadham; G. R. Hughes, Exeter; S. E. Whitnall, Magdalen; W. C. Wigan, St. John's; and A. P. Yonge, Exeter.

SECOND M.B. EXAMINATION.

Pathology.—P. E. H. Adams, Exeter; O. E. Berkeley Hill, Trinity; H. W. Brodribb, University; E. Barstal, Trinity; H. R. Dean, New; P. J. Dear, non-collegiate; J. Freeman, University; J. R. Hebb, St. John's; J. G. Priestley and R. H. Sankey, Christ Church, and H. G. F. Spurrell, Merton.

UNIVERSITY OF CAMBRIDGE.—At examinations for medical and surgical degrees, Easter term, the following candidates were successful :—

FIRST EXAMINATION.

Part I. Chemistry and Physics.—C. W. Archer, Trinity; G. R. Batterbury and R. L. Barker, Caius; J. P. Benskin, Christ's; L. Bromley, Caius; J. S. Burn, Trinity; A. S. Cane, King's; H. G. P. Castellain, M.A., Trinity; H. F. Comyn, King's; C. H. Cox, Jesus; J. H. Crofton, Pembroke; C. C. Dobell, Trinity; E. A. Dyson, Jesus; A. Feiling, Pembroke; J. E. Ferrar, Sidney Sussex; R. H. W. Fisher, Emmanuel; R. Gamlin, King's; R. W. B. Gibson, Jesus; P. K. Gilroy, H. Selwyn; S. Gordon, Pembroke; A. R. Hargreaves, Trinity; T. W. Haward, King's; C. B. Hawthorne, Clare; G. Holmes, Caius; B. Hughes, B.A., H. Selwyn; J. M. Jarvie, Emmanuel; A. P. Methuen, Trinity; G. W. Mitchell and P. Newton, Clare; T. E. Osmond and G. M. Parker, Emmanuel W. M. Penny, Jesus; H. F. Percival, Trinity; F. H. Robinson; Queens'; L. M. Routh, Caius; E. N. Russell, Trinity; J. H. Ryffel M.A., Peterhouse; J. G. Saner, Caius; M. R. Sawhny, Downing; H. Scott, Trinity; R. M. R. Thursfield, H. Selwyn; R. H. Vercoe, St. John's; P. B. Wallis, Pembroke; E. P. W. Wedd, Caius; J. M. Weddell, Christ's; and M. M. Woods, Clare.
Part II. Elementary Biology.—J. W. Adams, Caius, F. S. Adams, Christ's; G. C. Alderson, Caius; W. B. G. Angus, Christ's; C. W. Archer, Trinity; H. L. Attwater, Pembroke; H. J. Baldwin, B.A., Emmanuel; R. L. Barker and G. R. Batterbury, Caius; J. P. Benskin, Christ's; A. S. Cane, King's; H. G. P. Castellain, M.A., Trinity; F. G. Cawston, Caius; H. F. Comyn, King's; C. H. Cox, Jesus; J. H. Crofton and J. H. Cumming, Pembroke; C. C. Dobell, Trinity; C. A. Dottridge, Clare; A. Feiling, Pembroke; R. H. W. Fisher, Emmanuel; R. Fisher, Sidney Sussex; R. Gamlin, King's; G. Gamlin, Pembroke; W. Gillison, Peterhouse; P. K. Gilroy, H. Selwyn; S. Gordon, Pembroke; A. H. Gosse and C. C. Harrison, Caius; R. H. P. Hick, Christ's; R. F. Higgin and S. J. Higgins, Caius; B. Hughes, B.A., H. Selwyn; J. M. Jarvie, Emmanuel; J. S. Johson, Sidney Sussex; H. D. Lander, Caius; A. C. C. Lawrence, Trinity; J. C. Marklove and C. C. Messiter, Caius; B. L. Miles, Pembroke; G. W. Mitchell, Clare; H. G. Monteith, Pembroke; V. H. Mottram, Trinity; C. J. Nicholson and H. M. D. Nicoll, Caius; T. E. Osmond and G. M. Parker, Emmanuel; F. H. Robinson, Queens'; R. N. Russell, Trinity; J. H. Ryffel, M.A., Peterhouse; J. G. Saner, Caius; M. R. Sawhny, Downing; H. Scott, Trinity; A. S. Seabrooke, Christ's; I. Singh, Pembroke; R. M. R. Thursfield, H. Selwyn; R. H. Vicary, Caius; and E. T. Willans, Emmanuel.

SECOND EXAMINATION.

Human Anatomy and Physiology.—P. H. Bahr, B.A., Trinity; G. G. Butler, B.A., Emmanuel; R. N. Chopra, Downing; E. B. Clayton, B.A., Caius; G. G. Collett, Trinity; A. F. Comyn, B.A., Pembroke; A. J. W. Cunningham, Trinity; H. E. T. Dawes, B.A., St. John's; G. W. Dryland, B.A., Caius; H. G. Earle, Downing; T. G. Elger, Caius; D. Embleton, B.A., Christ's; G. B. Fleming, B.A., King's; C. L. Forde, B.A., and T. R. Glynn, B.A., Clare; J. W. Grice, B.A., King's; R. E. V. Hale, B.A., Caius; P. Hamill, G. A. F. Heyworth, B.A., and F. H. Holl, Trinity; W. D. Hopkins, Trinity Hall; A. F. Jackson, Peterhouse; W. M. Jeffreys, B.A., and R. P. Lamb, B.A., Trinity; K. A. Lees, B.A., King's; S. G. Luker, B.A., Pembroke; B. K. Nutman, B.A., Jesus; M. W. B. Oliver, B.A., and John H. Pratt, B.A., Trinity; C. E. Redman, B.A., Pembroke; A. C. H. Rothera, B.A., Emmanuel; C. E. F. Salt, B.A., Pembroke; H. A. Smith, B.A., H. Selwyn; H. H. Taylor, B.A., Pembroke; C. H. Treadgold, B.A., Clare; P. J. Verrall, Trinity; T. N. Wood, B.A., Pembroke; and O. K. Wright, B.A., Christ's.

THIRD EXAMINATION.

Part I. Pharmacology and General Pathology.—R. A. Clapham, B.A., Emmanuel; S. W. Cole, M.A., Trinity; A. I. Cooke, B.A., Caius; W. D. Coplestone, B.A., Jesus; A. W. D. Coventon, B.A., Trinity; G. W. Craig, B.A., Emmanuel; H. P. Crampton, B.A., Clare; W. L. Cripps, B.A., and L. G. Davies, B.A., Trinity; G. B. Davis, M.A., Corpus Christi; A. N. Dickson, Downing; L. Dukes, B.A., and A. C. D. Firth, B.A., Trinity; D. H. Fraser, B.A., Caius; H. P. Gibb, B.A., and G. E. Greenwood, B.A., Sidney Sussex; C. F. Hadfield, M.A., and Everard Harrison, B.A., Trinity; N. G. Harry, B.A., Jesus; E. C. Hughes, B.A., Clare; R. O. Lee, B.A., Emmanuel; W. B. Marshall, B.A., and T. M. Neatby, M.A., St. John's; W. H. Newton, B.A., Emmanuel; R. G. Nothwanger, M.A., St. John's; S. A. Owen, B.A., and G. G. Packe, B.A., Trinity; C. H. W. Page, M.A., Corpus Christi; P. N. Panton, B.A., Trinity; D. G. Pearson, B.A., Pembroke; C. T. M. Plowright, B.A., St. John's; R. H. Robbins, B.A., Trinity; O. L. Scarborough, B.A., St. John's; F. Shingleton-Smith, King's; H. F. Shrimshire, B.A., Jesus; W. H. R. Sutton, B.A., Downing; C. B. Ticehurst, B.A., St. John's; W. S. Tresawna, B.A., and S. L. Walker, B.A., Sidney Sussex; B. Wallis, B.A., and H. P. Weaver, B.A., Trinity; H. W. Wiltshire, B.A., Clare; and L. Worrall, B.A., Christ's.

At the Congregation on June 16th the following were admitted to degrees in medicine and surgery :—

Doctor of Medicine.—G. R. Slade, Trinity; and E. E. Prest, St. John's.
Bachelor of Medicine.—H. F. Horne, King's; A. S. Bradley, Caius; E. Gardiner, Caius; R. T. Harris, Christ's; and G. A. Wright, Christ's.
Bachelor of Surgery.—H. F. Horne, King's; H. Rischbieth, Trinity; A. E. Barclay, Christ's; J. Lambert, Downing; and H. L. Wilson, Selwyn.

At the Congregation on June 18th the following medical and surgical degrees were conferred :—

Doctor of Medicine.—W. H. W. Attlee, St. John's.
Doctor of Science.—Professor C. S. Sherrington, Caius.
Bachelor of Medicine.—C. Stiebel, Trinity Hall.
Bachelor of Surgery.—C. A. W. Pope, Trinity.

On June 21st the degree of Doctor of Medicine was conferred on Mr. S. Squire Sprigge, Caius. Dr. H. B. Roderick, Emmanual, has been appointed demonstrator of surgery. Dr. F. A. Bainbridge has gained the Raymond Horton Smith prize for his M D. thesis on the Adaptation of the Pancreas. Dr. B. N. Tebbs is honourably mentioned for his thesis on Symptomatic Parotitis. The examination in Tropical Medicine and Hygiene will be held on August 9th, 10th, and 11th, on the last of these days in the wards of the *Dreadnought* Seamen's Hospital, Greenwich.

FOREIGN UNIVERSITY INTELLIGENCE.—*Bologna:* Dr. Giuseppe Vannini of Rome has been recognised as *privat-docent* of Internal Pathology.—*Bordeaux:* Dr. Venot has been appointed *agrégé* of Surgery.—*Breslau:* Dr. Eduard Müller has been recognised as *privat-docent* of Internal Medicine.—*Copenhagen:* Dr. Axel Jörgensen has been recognised as a member of the teaching staff.—*Erlangen:* Professor Pfannenstiel of Giessen and Professor Krönig of Jena having declined the chair of Midwifery and Gynæcology Dr. Stoeckel has been appointed temporarily to the charge of the clinic.—*Freiburg:* The names mentioned in connexion with the chair of Obstetrics and Gynæcology vacated by Dr. Hegar are those of Professor Pfannenstiel of Giessen and Professor Döderlein of Tübingen.—*Geneva:* Dr. J. Girard has been appointed to the chair of Surgery vacant by the resignation of Professor Julliard.—*Göttingen:* Dr. Julius Voigt has been recognised as *privat-docent* of Gynæcology.—*Lille:* Dr. Lefort has been appointed *agrégé* of Surgery and Dr. Bué *agrégé* of Midwifery.—*Lyons:* Dr. M. G. Gayet and Dr. C. M. Patel have been appointed *agrégés* of Surgery and Dr. Commandeur *agrégé* of Midwifery.—*Montpellier:* Dr. Soubeiran has been appointed *agrégé* of Surgery and Dr. C. Guérin *agrégé* of Midwifery.—*Nancy:* Dr. G. F. Gross has been appointed *agrégé* of Surgery and

Dr. Feuhinsholz *agrégé* of Midwifery.—*Paris:* Dr. Emil Roux has been appointed to the late Dr. Duclaux's post in the Pasteur Institute, Dr. Elias Metschnikoff succeeding Dr. Roux. Dr. Morestin, Dr. A. P. Duval, and Dr. Proust have been appointed *agrégés* of Surgery and Dr. Brindeau *agrégé* of Midwifery.—*Prague (Bohemian University):* Dr. Franz Procházka has been recognised as *privat docent* of Internal Medicine.—*Toulouse:* Dr. Desforges-Mériel has been appointed *agrégé* of Surgery and Dr. Thoyer *agrégé* of Midwifery.—*Tubingen:* Dr. P. Linser has been recognised as *privat-docent* of Skin and Sexual Diseases and Dr. M. von Brunn and Dr. Blauel as *privat-docenten* of Surgery.

DEATH OF MR. RICHARD JESSAP DEARDEN, M.R.C.S.ENG., L.R.C.P. EDIN.—Manchester has again to mourn the loss of a well-known member of the medical profession. Mr. R. J. Dearden died after a very short and unexpected illness. He was taken ill after a post-mortem examination, blood poisoning supervened, and he died on June 11th. For many years he was one of the surgeons to the city police force and was formerly one of the honorary surgeons to the Chorlton-on-Medlock Dispensary. He was a member of the British Medical Association and of the Medico-Ethical Association, &c. He was much respected by his medical brethren in Manchester. It is a sad testimony to the dangerous character of a large part of a medical man's work that a man of good physique, with a fair prospect of life, should be cut off in his forty-ninth year through the discharge of his duty. At the inquest held yesterday the jury found that Mr. Dearden had died as the result of misadventure and expressed their sympathy with his family. Mr. E. A. Gibson, the coroner, expressed his regret at Mr. Dearden's death and at the City police-court "Dr. Russell spoke warmly of the work of Mr. Dearden on the bench and in other walks of life, and Mr. Edgar Brierley (the stipendiary) also expressed appreciation of the deceased gentleman's performance of his magisterial duty."

NATIONAL SOCIETY FOR THE EMPLOYMENT OF EPILEPTICS.—The eleventh annual meeting of the governors of this society was held on June 20th at the offices of the society, 12, Buckingham-street, Strand. The chair was taken by Mr. E. Montefiore Micholls and the reports of the executive committee and the honorary medical staff for the year 1903 were received and adopted. In the former report attention is called to the fact that the society is now prepared, as soon as funds are forthcoming, to undertake the care of young epileptic children. This had from the first been one of its principal objects, but in consequence of its objections to certain conditions as to homes for epileptic children contained in the Elementary Education (Defective and Epileptic Children) Act, 1899, it was felt necessary to postpone undertaking this work until the clauses objected to were repealed, which has now at length been done by a measure promoted by this society and passed last session. It is anticipated by the society's medical advisers that the care of young children will eventually prove to be the most fruitful branch of the society's work and the importance of commencing it at the earliest possible date is strongly urged. The report records various extensions made at the Chalfont Colony during the year, including the erection of a home for 24 Hampshire cases and the commencement of an administrative building. The report of the honorary medical staff states that while there have been no special features of a novel kind from the medical aspect the experiences of the year have fully confirmed their previous reports as to the success and usefulness of the colony system and methods in the care, treatment, and management of epileptics.

PLAGUE IN HONG-KONG.—In his report on the health and sanitary condition of Hong-Kong during the year 1903 Dr. J. M. Atkinson, the principal civil medical officer, states that plague again occurred in an epidemic form, 1415 cases being notified as compared with 572 in 1902. The monthly numbers of cases notified were as follows:—January, 4; February, 29; March, 115; April, 272; May, 515; June, 343; July, 85; August, 32; September, 9; October, 5; November, 4; and December, 2. As is usually the case, a marked decline occurred as soon as the mean temperature rose to 82° F. It has lately been found possible to diagnose plague in an earlier stage than formerly; this is effected by a modification of Ross's method of microscopically examining blood films adopted by Mr. J. Bell of the Government Civil Hospital. The internal administration of carbolic acid in large doses—12 grains every two hours—has given encouraging results, and the death-rate of 60·6 per cent. for the year at Kennedy Town Hospital was the lowest recorded since 1894. Plague-infected fowls, quails, and ducks have been found in the public markets, and plague-infected bugs, fleas, and cockroaches have also been discovered in houses where cases had occurred; it therefore appears probable that the disease may be conveyed both by certain kinds of provisions and by body vermin. The number of rats caught in 1903 was 101,000 as compared with 117,800 in 1902; in June it was discovered that rats were being imported into the colony for the sake of the bonus. Haffkine's prophylactic was used for the inoculation of 352 members of the plague staff; five of them afterwards developed plague and two of these died.

UNIVERSITY OF LONDON.—A course of five lectures will be delivered by Dr. T. G. Brodie, the professor-superintendent of the Brown Animal Sanatory Institution, on the Etiology and Comparative Pathology of Chronic Nephritis and of Uræmia. The lectures will be delivered in the physiological laboratories of the University of London, South Kensington, on Thursday, June 30th, and four following Thursdays (July 7th, 14th, 21st, and 28th), at 5 o'clock P.M. each day, and are free.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Medical and Dental Companies.

Sir John Batty Tuke has moved for a return showing the number and names of companies registered under the Companies Act, 1862, in England and Wales, Scotland and Ireland, for the specific purposes of carrying on medical and dental practices.

Tuberculosis in Animals.

Dr. Farquharson and Dr. Hutchinson have been appointed members of the Select Committee of the House of Commons on the Tuberculosis (Animals) Compensation Act. The committee commenced the hearing of witnesses this week.

The Public Health Bill.

The answer which Mr. Long gave to a question put by Sir Carne Rasch on June 16th is taken as indicating that the Public Health Bill which was promised in the King's Speech will not now be introduced this session. He said he should be glad to introduce the Bill if he saw a prospect of its making progress. As a matter of fact business has become so congested that nobody expects that the Government will succeed in carrying this session all the Bills already before Parliament.

HOUSE OF LORDS.

THURSDAY, JUNE 16TH.

A Revaccination Bill.

The Duke of NORTHUMBERLAND, in moving the second reading of a Bill which proposes to have all children revaccinated within six months after they attain 12 years of age, said that experience showed that revaccination was necessary to afford complete protection. He pointed out that the report presented to the Local Government Board by Dr. Lowe on the practice in Germany made it evident that in that country small importance was attached to isolation, reliance being placed solely on a thorough system of vaccination and revaccination. The deaths in Germany from small-pox during the last 12 years have been less than 13 per 1,000,000, while in England they had been 207 per 1,000,000. If revaccination were insisted on in this country the difficulties now experienced in the production of glycerinated calf lymph to meet the sudden demands of epidemics of small-pox would be removed, as would also the necessity for providing isolation hospitals on so large a scale. This would mean a great saving to the ratepayers. One reason for selecting the age of 12 was that the protective effect of infantile vaccination was supposed to be lessened rapidly in consequence of the rapid growth and development of tissue. After 12 this process went on more slowly and a child, if revaccinated at 12, might reasonably be believed to be protected till middle life. The Bill threw upon parents the responsibility of having their children revaccinated at the appointed age and obliged local authorities and others who had charge of children of the age 12 to send a list of such children twice a year to the vaccination authority.

The Marquis of LANSDOWNE said that the Government was in no sense hostile to the principle of the Bill; that was to be taken as meaning that revaccination in its opinion was a desirable thing. In fact, the evidence on the point seemed to be conclusive. The interesting information lately acquired by the Local Government Board with regard to the results of revaccination in Germany showed that in 12 years there were only 687 deaths from small-pox in a population of 56,000,000, whereas in this country during the same period with a population of only 32,000,000 there were 6750 deaths from the same disease. Those were startling and suggestive figures. The Royal Commission stopped short of recommending compulsory vaccination and its view prevailed with the

Government. Moreover, he could not help thinking that the Local Government Board had been wise in attempting to lead rather than to drive the people towards revaccination. He was told that whereas in 1898 the proportion of successful vaccinations to births was 54 per cent., in 1901 the proportion was no less than 76 per cent. The Government had not thought it desirable to attempt legislation in favour of compulsory revaccination and obviously in any case it was impossible to contemplate the passing of such a measure during the present session. Being in favour of revaccination the Government certainly did not desire to oppose the second reading, but it must be understood that it did not in any way commit itself to the details of the measure.

Lord NEWTON made a few remarks in which he reminded the House that when in 1898 the Government established the existence of the "conscientious objector" the Bill was only passed on the distinct understanding that the Government would subsequently bring in a Revaccination Bill. Nothing had been heard of the Bill since and consequently he was not quite satisfied with the noble marquis's statement.

The Earl of TANKERVILLE, speaking for the first time in the House, opposed the Bill. He entertained, he said, very serious doubts as to the efficacy of vaccination and he suggested that a committee should be appointed to examine scientifically all the evidence. As to vaccination itself it seemed contrary, in his opinion, to natural law that the injection of animal poison into human flesh could produce health.

The Bill was read a second time without a division.

HOUSE OF COMMONS.

WEDNESDAY, JUNE 15TH.

Outdoor Medical Relief.

Sir WALTER FOSTER asked the President of the Local Government Board whether his attention had been called to the high infant mortality in the large towns of the kingdom; whether, with a view to lessening this mortality, he would inquire whether the facilities for granting outdoor medical relief were sufficient in the great provincial towns and in districts like St. George's-in-the-East, Whitechapel, Limehouse, and Stepney; and, if not, whether he would take steps to improve the methods of granting medical out-relief.—Mr. LONG replied: I am aware of the figures referred to as to infant mortality. Except that in some places additional relieving officers might be appointed I have not at present seen any reason to suppose that the existing facilities for granting outdoor medical relief are insufficient; but so far as the metropolis is concerned a special investigation is at this moment being made by one of the assistant inspectors of the department as to the arrangements for outdoor medical relief.

Sir WALTER FOSTER also asked the President of the Local Government Board whether he was aware that some boards of guardians had largely reduced the number of applications for medical out-relief by means of giving all medical out-relief on loan in the first instance (subject to subsequent cancelling of the loan if the guardians thought fit), or by compelling parents to appear before the board or a committee, and if so, whether he proposed to take any action in the matter.—Mr. LONG replied: My attention has been called to one instance in London where a system of the kind above-mentioned has been introduced and where it is said that the result has been to reduce the applications for outdoor medical relief. But, as I have stated in reply to another question to-day by the honourable Member, a special investigation is being made by one of the assistant inspectors of the department as to the arrangements for outdoor medical relief in the metropolis.

Children in Workhouses and Infirmaries.

Sir ERNEST FLOWER asked the President of the Local Government Board whether he would state the number of children at present accommodated in metropolitan district and separate Poor-law schools, metropolitan workhouses, and metropolitan infirmaries respectively.—Mr. LONG replied: The numbers on the 4th inst. were as follows. In district and separate schools (including 827 in scattered homes and 278 in separate receiving homes), 10,902; in workhouses, 1342; and in infirmaries, 1960.

Publication of Lists of Deaths.

Sir WALTER FOSTER asked the President of the Local Government Board whether he would communicate with the Registrar-General with a view to the issue of an order to the registrars of births and deaths to place every week in a convenient position in their offices, accessible to the public, a list of deaths registered by them with the date of death in each case but not specifying the causes of death, so that the public might be informed of the names of persons whose deaths were registered in each registration district.—Mr. LONG replied: I have communicated with the Registrar-General on this subject and I find that it would not be practicable to give effect to the suggestion of the honourable Member, apart from any question of the expediency of so doing.

THURSDAY, JUNE 16TH.

Milk for Out-relieved Children.

Sir WALTER FOSTER asked the President of the Local Government Board whether boards of guardians had printed or written scales of relief which provided for out-relief in money and bread according to the number of children needing relief; and, if so, whether the Local Government Board would either direct its inspectors to advise, or to issue a circular advising, an allowance of milk in the case of young out-relieved children needing milk and also to nursing mothers in receipt of out-relief.—Mr. LONG replied: I believe that some boards of guardians have scales of relief of the kind referred to. I think boards of guardians may be trusted to use their discretion as to the granting of allowances of milk in the cases mentioned in the latter part of the question but I will bring the matter under the notice of the inspectors.

Poor-law Medical Relief.

Sir WALTER FOSTER asked the President of the Local Government Board whether rules of administration were or had been recently in force in the Atcham union providing that when relief was administered to an able-bodied labouring man who was himself ill, and the illness was not contagious, the board required that some of the children should go to the workhouse during the sickness, and if the man was earning good wages and the sickness did not continue for a long period, the family not being large, the repayment of the whole or part of the relief was required; that where the wife or children of an able-bodied man in work were ill relief was refused, except in very serious cases, such as when the family was suffering from a contagious or infectious disease or where many of the family were ill at the same time, or where the man had had a good deal of previous sickness in the family and was unable to procure the necessary means for their recovery; that no outdoor relief was granted to able-bodied widows with children, except in sickness; if the woman's character was good an offer was made to her to send such a number of her children to the workhouse for training as would leave her only such as she would be enabled to provide for as well as for herself; and, if so, whether these rules had the sanction of the Local Government Board.—Mr. LONG replied: I have received a copy of a report made in 1890 by the late chairman of the Atcham board of guardians in which is included a document drawn up by the clerk in 1871 relating to the precedents and rules in the proceedings of the guardians in the administration of relief from 1836 to 1871. This document, which embodies principles as to the administration of relief to the effect mentioned in the question, gives, as I understand, the practice of the guardians up to 1871 but forms no part of any official rules. I am informed that the precedents on which these principles are founded are not in any way binding on the administration of the guardians. I gather that these principles are acted upon and referred to by the guardians though they are to a certain extent modified in practice. No sanction on the part of the Local Government Board has been given to them.

The Public Health Bill.

Sir CARNE RASCH asked the President of the Local Government Board whether the Public Health Bill, as promised in the King's Speech, would be introduced this session and whether it would include legislation as to the discharge of crude sewage in or near shell fisheries, as recommended by the Royal Commission.—Mr. LONG replied: I should be glad to introduce the Bill if I saw a prospect of its making progress, but I cannot undertake to say beforehand what will be the matters dealt with by the measure.

Question as to an Inquest.

Mr. BELL asked the Secretary of State for the Home Department whether his attention had been called to an inquest that was held at St. Michael's on June 8th on the body of Frederick Thistleton who was killed on the new line being constructed between Tenterden and Headcorn and to the fact that the inquest was held within a few hours of the accident and without the attendance of any of the injured men or time for any of the deceased's relatives to attend, and if so, whether he would ascertain the reason for this hasty inquiry in the absence of the evidence of the injured men.—Mr. AKERS-DOUGLAS replied: I have communicated with the coroner with regard to the case mentioned in the question and have ascertained that the accident occurred at 10 A.M., that in the exercise of his discretion the coroner thought it desirable to hold the inquest at once, and that it was opened at 8.30 P.M. the same day. Evidence as to the cause of death was taken carefully and at considerable length and an adjournment for further evidence was considered unnecessary because it had been ascertained that the injured men could only confirm the evidence already before the court and that the relatives could give no fresh information. The coroner assures me that the inquiry, which lasted more than two hours, was in no sense a hasty one and that there would have been no justification for an adjournment.

TUESDAY, JUNE 21ST.

A Post-office Appointment.

Mr. J. P. FARRELL asked the Postmaster-General whether any medical officer had been placed in charge of the health of the Edgeworthstown post office staff, consisting of some 80 public servants, and if not whether an appointment would be now made.—Lord STANLEY replied: The appointment of a medical officer to the post-office of Edgeworthstown is under my consideration.

BOOKS, ETC., RECEIVED.

BAILLIÈRE, TINDALL, AND COX, 8, Henrietta-street, Covent-garden, W.C.

Questions and Answers on Midwifery for Midwives, with Syllabus of Lectures for the "L.O.S." delivered at the Fulham Midwifery Training School by A. B. Calder, M.B., M.R.C.S. Price 1s. 6d. net.

The Prevention of Disease in Armies in the Field. By Robert Caldwell, F.R.C.S., D.P.H., Major, R.A.M.C., Member late War Office Committee on Field Sanitation in connexion with the South African Campaign. Price not stated.

BURLEIGH, THOMAS, 376 and 377, Strand, W.C.

Africa and National Regeneration. By E. F. Chidell. Second edition. Price 1s.

CHURCHILL, J. AND A., 7, Great Marlborough-street W.

A Dictionary of Medical Science. By Robley Dunglison, M.D., LL.D., late Professor of Institutes of Medicine and Medical Jurisprudence in the Jefferson Medical College of Philadelphia, &c. Twenty-third edition. Thoroughly revised by Thomas L. Stedman, A.M., M.D., Fellow of the New York Academy of Medicine. Price 34s. net.

The Examination of Waters and Water Supplies. By John C. Thresh, D.Sc. Lond., M.D. Vict., D.P.H. Camb., Honorary Diplomate in Public Health, Royal Colleges of Physicians and Surgeons, Ireland; Examiner in State Medicine, University of London. Price 14s. net.

DE VERE AND CO., L., 7, Maddox-street, Bond-street, W.

Cycle and Camp. By T. H. Holding, author of "Watery Wanderings 'Mid Western Lochs," &c. Price 1s.

FAWCETT, WOODFORD, AND CO., 36, 37, and 38, Southampton-street, Strand, W.C.

£300 per annum from 30 Acres, or A Modern Bee Farm and its Economic Management. By S. Simmins. Revised edition. Eighth thousand. 1904. Price 5s.

GRIFFIN, CHARLES, AND COMPANY, LIMITED, Exeter-street, Strand, W.C.

A Treatise on Applied Anatomy. By Edward H. Taylor, M.D. Dublin Univ., F.R.C.S.I., Surgeon to Sir Patrick Dun's Hospital, University Examiner in Anatomy and late Lecturer in Applied Anatomy, Trinity College, Dublin. Price 30s. net.

HIRSCHWALD, AUGUST, Unter den Linden, 68, Berlin, N.W.

Ueber Immunität bei Syphilis nebst Bemerkungen über Diagnostik und Serotherapie der Syphilis. Von Dr. Franz Nagelschmidt, Berlin. Price M. 1.60.

Wurmfortsatzentzündung und Frauenleiden. Von Dr. Theodor Landau, Berlin. Price M. 2.

Ueber den Schluckmechanismus. Von Professor Dr. Julius Schreiber, Direktor der Medizinischen Universitäts-Poliklinik zu Königsberg i. Pr. Price M. 3.

KEGAN PAUL, TRENCH, TRÜBNER, AND CO., Limited, Dryden House, Gerrard-street, W.

Childhood in Health and Sickness. By J. Robertson Day, M.D. Lond., M.R.C.S. Eng., L.R.C.P. Lond., L.S.A., Fellow and late President of the British Homœopathic Society; Physician for Diseases of Children to the London Homœopathic Hospital. Price 5s. net.

KIMPTON, HENRY, 13, Furnival-street, Holborn, E.C.

A Manual of Clinical Diagnosis by Means of Microscopical and Chemical Methods. For Students, Hospital Physicians, and Practitioners. By Charles E. Simon, M.D., of Baltimore, Md. Fifth edition, thoroughly revised and enlarged. Price 21s. net.

A Practical Treatise on Medical Diagnosis. For Students and Physicians. By John H. Musser, M.D., Professor of Clinical Medicine in the University of Pennsylvania. Fifth edition, revised and enlarged. Price 36s. net.

LEHMANN, J. F., München.

Lehmann's Medizinische Handatlanten. Band xxxi. Atlas und Grundriss der Lehre von den Augenoperationen. Von Professor Dr. O. Haab in Zürich. Price M. 10.

LIFE ASSURANCE MEDICAL OFFICERS' ASSOCIATION, London. Hon. Secs.: Dr. Hector Mackenzie and Dr. Arthur T. Davies.

Transactions of the Life Assurance Medical Officers' Association, London, comprising the Report of the Proceedings for 1902 and 1903. Price not stated.

LUDEKING GEBRÜDER, Hamburg.

Pestbacillen im Pestserum. Reflexionen über Isotherapie. Von Dr. von Niessen, Wiesbaden. Price M. 1.50.

MARLBOROUGH, E., AND CO., 51, Old Bailey, E.C.

Dutch Self-taught. With Phonetic Pronunciation. By Captain C. A. Thimm. Price, wrapper, 2s.; cloth, 2s. 6d.

OFFICE OF THE SUPERINTENDENT OF GOVERNMENT PRINTING, Calcutta.

Scientific Memoirs by Officers of the Medical and Sanitary Departments of the Government of India. (New Series.) No. 9. Second Report of the Anti-Malarial Operations at Mian Mir, 1901-1903. By Lieut. S. R. Christophers, M.B., I.M.S. (On Special duty.) Issued under the Authority of the Government of India by the Sanitary Commissioner with the Government of India, Simla. Price As. 10 or 1s.

SAMPSON LOW, MARSTON, AND COMPANY, LIMITED, St. Dunstan's House, Fetter-lane, Fleet-street, E.C.

Swimming. With lists of books published in English, German, French, and other European Languages and Critical Remarks on the Theory and Practice of Swimming and Resuscitation, Biography, History, Bibliography, including upwards of 100 Illustrations. First edition published in 1868. By Ralph Thomas, Honorary Member of the Executive Committee of the Life-Saving Society, 1893-1904. Price 10s. 6d. net.

SAUNDERS, W. B., AND COMPANY, Philadelphia, New York, and London.

Obstetric and Gynecologic Nursing. By Edward P. Davis, A.M., M.D., Professor of Obstetrics in the Jefferson Medical College, Philadelphia, and in the Philadelphia Polyclinic. Second edition, revised. Price 8s. net.

Diseases of the Intestines and Peritoneum. By Prof. Dr. Hermann Nothnagel, Professor of Special Pathology and Therapy, University of Vienna. Edited, with additions, by Humphrey D. Rolleston, M.D., F.R.C.P., Physician to St. George's Hospital, London. Nothnagel's Encyclopedia of Practical Medicine, English edition. Authorised translation from the German, under the editorial supervision of Alfred Stengel, M.D., Professor of Clinical Medicine in the University of Pennsylvania. Price 21s. net.

SCIENTIFIC PRESS, LIMITED, 28 and 29, Southampton-street, Strand, W.C.

How to Become a Certified Midwife. By E. L. C. Appel, M.B., B.S., B.Sc. Lond. Price 1s. net.

VAIL, JOHN, Government Printer, Hobart.

Intercolonial Medical Congress of Australasia. Transactions of the sixth session held in Hobart, Tasmania, February, 1902. Published under the direction of the Literary Committee by Gregory Sprott, M.D. Price not stated.

WALTER SCOTT PUBLISHING CO., Limited, London and Newcastle-on-Tyne.

Cedric Sleep. By Alec Cook, author of "The Parish Doctor," &c. Price 6s.

WILLIAMS AND NORGATE, 14, Henrietta-street, Covent-garden, W.C.

Kurzes Lehrbuch der Desinfektion als Nachschlagebuch für Desinfektoren, Aerzte, Medizinal-und Verwaltungsbeamte. Unter Zugrundelegung der Einrichtungen der Desinfektionsanstalt der Stadt Cöln. Zusammengestellt von Dr. med. E. Czaplewski, Direktor des Bakteriologischen Laboratoriums der Stadt Cöln. Price 2s. 6d. net.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.

BEVERS, EDMUND C., M.A., M.B., B.Ch. Oxon., has been appointed Honorary Assistant Surgeon to the Radcliffe Infirmary, Oxford.

BLACKBURNE, GEORGE HUGH SPENCER, M.B., Ch B. Melb., has been appointed to act for and in the place of the Secretary to the Public Health Board, West Australia.

BRYAN, J. M., M.R.C.S., L.R.C.P. Lond., has been appointed Public Vaccinator for the St. Giles's and St. Andrew's Districts of the Northampton Union.

CRUICKSHANK, A., M.B., M.S. Aberd., has been appointed Certifying Surgeon under the Factory Act for the Stonehaven District of the county of Kincardine.

DAVIS, HENRY J., M.A. Cantab., M.R.C.P. Lond., has been appointed Assistant Physician in charge of the Throat and Ear Department of the West London Hospital.

EVERED, A. C., L.R.C.P., R.C.S. Edin., has been appointed Quarantine Officer, Albany, West Australia.

FARQUHARSON, D. A. R., M.B., M.S. Aberd., has been appointed Certifying Surgeon under the Factory Act for the Washington District of the county of Durham.

FIELDING-OULD, ROBERT, M.A., M.D. Oxon., has been appointed Pathologist to the City of London Hospital for Diseases of the Chest.

FLORANCE, EGBERT, M.D. Pennsylvania, U.S.A., has been appointed Visiting Surgeon to the Gaol at Cootamundra, New South Wales, Australia.

FLYNN, IGNATIUS JOSEPH, M.B., M.S., M.D. R.U.I., has been appointed Acting District Medical Officer, Quarantine Officer, and Public Vaccinator for the Urban and Suburban Districts of Bunbury and Rural District of Wellington, Western Australia, *pro tem.*

HART, JOHN WESLEY, M.D. Edin., has been appointed Deputy Licensing Magistrate for the District of Bingara, New South Wales, Australia, *pro tem.*

HAYWARD, WILLIAM THORNBOROUGH, M.R.C.S., has been appointed a Member of the Board of Management of the Adelaide Hospital, South Australia.

HILL, ALFRED WILLIAM, M.D. Brux., M.R.C.S., has been appointed a Member of the Board of Management of the Adelaide Hospital, South Australia.

HOBSON, H. OVERTON, M.D. Edin., has been appointed Government Medical Inspector of the Baths and Springs, Helouan, near Cairo, by the Egyptian Government.

JOHNSON, F. W., M.B., B.S. Vict., has been appointed Certifying Surgeon under the Factory Act for the Bawtry District of the counties of York and Nottingham.

KEENAN, J. F., M.B., B.S. R.U.I., has been appointed Certifying Surgeon under the Factory Act for the Ballinalee District of the county of Longford.

MAW, G., M.R.C.S., L.R.C.P. Lond., has been appointed Certifying Surgeon under the Factory Act for the Ulceby District of the county of Lincoln.

MCCRACKEN, J. S., M.B., C.M. Edin., has been appointed Honorary Physician to the Hospital for Sick Children, Newcastle-upon-Tyne.

ROGERS, RICHARD SANDERS, M.D. Edin. and Adel., has been appointed a Member of the Board of Management of the Adelaide Hospital, South Australia.

THOMPSON, GEORGE W., M.B., C.M. Edin., F.R.C.S. Eng., has been appointed Surgeon to the Western Ophthalmic Hospital, Marylebone-road, W.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ARMY MEDICAL SERVICE, War Office.—Examination for not less than 30 Commissions in the Royal Army Medical Corps.

BIRMINGHAM AND MIDLAND EYE HOSPITAL.—House Surgeon. Salary £75 per annum, with board and lodging.

BIRMINGHAM CITY ASYLUM.—Junior Assistant Resident Medical Officer. Salary £150 a year, with board, lodging, and washing.

BOURNEMOUTH, THE ROYAL BOSCOMBE AND WEST HANTS HOSPITAL.—House Surgeon. Salary £80 per annum, with board, lodging, and washing.

BRIGHTON THROAT AND EAR HOSPITAL, Church-street, Queen's-road.—Non-Resident House Surgeon for six months, renewable. Salary at rate of £75 per annum.

CANTERBURY BOROUGH ASYLUM.—Assistant Medical Officer, unmarried. Salary £140 per annum, with quarters, board, and laundry.

CARMARTHENSHIRE INFIRMARY.—Resident Medical Officer, unmarried. Salary £100 per annum, with apartments, board, attendance, fire, gas, and washing.

COVENTRY AND WARWICKSHIRE HOSPITAL.—Assistant House Surgeon. Salary £80 per annum, with apartments, board, washing, and attendance.

DERBYSHIRE ROYAL INFIRMARY.—Senior House Surgeon. Salary £100 per annum, with apartments, board, &c. Also Assistant House Surgeon for six months. Salary at rate of £80 per annum, with apartments, board, &c.

DUMFRIES AND GALLOWAY ROYAL INFIRMARY.—House Surgeon. Salary £40 per annum, with board and washing.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Shadwell, E.—Pathologist and Registrar. Honorarium of £10.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, S.E.—Eight Clinical Assistants in the out-patient department.

FARRINGDON GENERAL DISPENSARY, 11, Bartlett's-buildings, Holborn Circus, E.C.—Resident Medical Officer. Salary £120 per annum, with apartments, coals, gas, and attendance.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway, N.—Junior House Surgeon for six months. Salary at rate of £30 per annum, with board, lodging, and washing.

HUDDERSFIELD INFIRMARY.—Junior House Surgeon. Salary £40 per annum, with board, residence, and washing.

HULL ROYAL INFIRMARY.—Casualty House Surgeon. Salary £50, with board and lodging.

ISLE OF MAN GENERAL HOSPITAL AND DISPENSARY, Douglas.—Resident House Surgeon, unmarried. Salary £82 per annum, with board and washing.

LONDON TEMPERANCE HOSPITAL, Hampstead-road, N.W.—Resident Medical Officer. Salary £200 per annum, with board, lodging, and washing.

METROPOLITAN HOSPITAL, Kingsland-road, N.E.—Assistant Physician.

NATIONAL HOSPITAL FOR DISEASES OF THE HEART, Soho-square, W.—Assistant Physician.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, Bethnal Green, E.—Assistant Surgeon.

POPLAR HOSPITAL FOR ACCIDENTS, Poplar, E.—Assistant House Surgeon for six months. Salary at rate of £80 per annum, with board and residence.

ROYAL SEA-BATHING HOSPITAL, Margate.—Resident Surgeon, as Junior and as Senior for six months each respectively. Salary at rate of £80 and £120 per annum, with board and residence.

ST. GILES, CAMBERWELL, WORKHOUSE, Constance-road, East Dulwich.—Locum Tenens.

ST. MARY'S HOSPITAL MEDICAL SCHOOL, Paddington, W.—Lecturer on Chemistry. Salary £150 per annum and fees.

ST. PANCRAS INFIRMARY, Dartmouth Park-hill, London, N.—Junior Assistant Medical Superintendent. Salary at rate of £75 per annum and residential allowances.

STAMFORD, RUTLAND, AND GENERAL INFIRMARY.—House Surgeon, unmarried. Salary £100 per annum, with board, lodging, and washing.

STOCKPORT INFIRMARY.—Junior Assistant House Surgeon for six months. Salary at rate of £40 per annum, with board, washing, and residence.

STOCKTON AND THORNABY HOSPITAL, Stockton-on-Tees.—House Surgeon. Salary £250 per annum.

WEST BROMWICH DISTRICT HOSPITAL.—Resident Junior House Surgeon. Salary £50 per annum, with board, lodging, washing, and attendance.

WESTERN OPHTHALMIC HOSPITAL, 155, Marylebone-road, W.—Assistant Surgeon.

THE Chief Inspector of Factories, Home Office, S.W., gives notice of a vacancy as Certifying Surgeon under the Factory Act at Cranborne, in the county of Dorset.

Births, Marriages, and Deaths.

BIRTHS.

EVANS.—On June 17th, at Vernon House, Weybridge, the wife of Arthur V. Evans, M.R.C.S., of a son.

OLD.—On June 17th, at 202, Anerley-road, Anerley, S.E., the wife of George Greensill Old, M.B., Ch.M., of a son.

TURNER.—On June 15th, at Oundle, Northamptonshire, the wife of B. Roworth Turner, M.B., of a son.

MARRIAGES.

COOKE—FARRINGTON.—On the 22nd inst., at Rushall parish church, by the Rev. W. W. Boulton and the Rev. E. G. Burr, M.A., John George, son of the late W. H. Cooke, M.D., of Aldridge, to Eleanor Mary (Nellie), only daughter of John W. Farrington, of Walsall.

FOOTT—JOHN.—On June 20th, at St. Mary's Church, Kilburn, London, Fleet-Surgeon G. H. Foott, M.D., R.N., to Ines John, daughter of the late Robert John, of Coquimbo, Chili.

GRIERSON—SHAW.—On June 16th, 1904, at All Saints', Bentley-road, Liverpool, by the Rev. J. P. Baynes, M.A., John Turner Grierson, M.B., Ch.B. Viet., D.P.H. Cambs., to Annie Bartlett Wilson Shaw.

SAWARD—WHITTEN.—On June 20th, at St. George's, Hanover-square, W., Arthur H. M. Saward, M.R.C.S. Eng., L.R.C.P. Lond., of Richmond, Surrey, to Violet, eldest daughter of the late A. J. Whitten, I.C.S., of Upper Norwood.

STABB—RANSOME.—On the 20th of June, at Holy Trinity, Marylebone, by the Rev. H. O. Ransome, M.A. (brother of the bride), assisted by the Rev. W. S. King, M.A., Dr. Arthur Francis Stabb, of 132, Harley-street, W., to Florence Gertrude, second daughter of Jas. Edwd. and Alice Ransome, of Holme Wood, Ipswich.

THURSELL—ADKIN.—On June 15th, at St Paul's Winchmore-hill, Herbert Leslie Thurnell, M.A., M.D., to Minnie Violet Adkin, elder daughter of the Rev. Canon Adkin, of Kochstad, South Africa.

DEATH.

GRAHAM.—On June 19th, at Laurel Bank, Hilldrop-road, N., Thomas Graham, M.R.C.S. Eng., L.S.A.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

THE BLANTYRE BONE-SETTER.

THE *Daily News* and the *Daily Chronicle* have recently been booming a bone-setter in Blantyre, a retired coal miner, in a style that we are not accustomed to meet with in responsible London publications. The *Daily News*, under the heading "Scotch Specialist Indisposed," after expatiating on the bone-setter's long-established local fame, says in an article from "our own correspondent":—"On paying a visit to Mr. Rae's modest house in Blantyre I learned that he was confined to bed from overwork. For weeks he has been at the service of cripples from morning to night. At the moment he has between five and six hundred patients on his list. They mostly hail from long distances, and are meantime patiently lodging in the miners' houses in the neighbourhood, and the miners' wives are reaping a rich harvest in seeing to their wants. Although Mr. Rae was not well enough to be interviewed I learned that he only undertakes to cure deformity of bones, and will not attempt a cure in cases where diseases are due to nervous causes. He does not follow the prevailing practice of breaking deformed limbs and resetting them by a liberal use of finger and thumb. He straightens out deformed bones. His speciality lies principally in treating spinal disorders and deformed joints." We should like to know from the *Daily News*, or "our own correspondent," whose prevailing practice it is to break and to reset deformed limbs "by a liberal use of finger and thumb," and generally what evidence exists, beyond Mr. Rae's not wholly disinterested assertions, of the truth of any of the statements made. The *Daily Chronicle* says that Rae "set himself to study anatomy and physiology and with characteristic determination he conquered his difficulties." How does the *Daily Chronicle* know that Mr. Rae has conquered any difficulties, seeing that he has submitted himself to no tests? The representative of this paper tells a story of Mr. Rae without seeing how it redounds to his credit as a man of business, but regarding the anecdote as evidence of altruism. "The collier surgeon," says the *Daily Chronicle*, "has an ear for the still sad call of humanity. A Bolton gentleman upon whom he operated successfully sent him a cheque for £100. The honest miner returned it, pointing out that his fee of 10s. had been paid but suggesting that the money might be used on behalf of poor Boltonians who could not afford the journey over the border. The suggestion was acted upon, with the result that seldom a day passes in which some sufferer from the county palatine does not consult the Blantyre specialist with benefit." A more suspicious person than the representative of the *Daily Chronicle* might have seen that as Mr. Rae gets his £100 all the same and gets advertisement from 200 patients he has done a good stroke of business. The 200 people will not be benefited, but any improvement in them of any sort that takes place within the next ten years will be attributed by themselves or their relatives to the resourcefulness of the characteristically determined anatomist and physiologist of the coal-pit. The representative of the *Daily Chronicle*, by the way, says that Mr. Rae "works with finger and thumb, which from practice, are strong as a vice." The authors of these kind of contributions should make their yarns agree. But what stuff for the first-class newspapers of the metropolis to print!

THE DISINFECTING PIPE.

To the Editors of THE LANCET.

SIRS,—I see in your issue of April 23rd, p. 1172, a letter from "Nicotine" regarding a medical officer habitually smoking when going round the wards of a fever hospital. When as a student I was doing a course of fever work at the North-Western Hospital, Hampstead, I was told that one of the resident medical officers of that institution had made cultures from the throats of nurses employed in the diphtheria wards, also from his own throat. In every case he found diphtheria bacilli in the case of the nurses; and in his own throat also, except after he had been smoking. If these researches are confirmed by further experiments, would it not be permissible to allow medical officers and nurses to smoke when employed among cases of diphtheria and possibly scarlet fever? I always take care now to smoke a pipe after visiting a diphtheria patient.

I am, Sirs, yours faithfully,

W. A. TRUMPER, M.R.C.S. Eng., L.R.C.P. Lond.

Bethulie, Orange River Colony, May 29th, 1904.

"EVAPORATED CREAM."

Messrs. Fussell and Co., of 4, Monument-street, London, E.C., point out with regard to our notice in THE LANCET of June 18th (p. 1732) of the above preparation that the tin in which there is only sufficient for one supply is called "the nursery or traveller's size" and the large one "the family size." The former contains ample "full cream" milk for the ordinary requirements of the nursery or for one or two people campaigning or travelling. The advantage of the small-sized tin, in short, is that it contains sufficient for use on a small scale so that a freshly opened tin may be used each time.

A BRILLIANT DIAGNOSIS.

THE following amusing little story appears in the columns of the last issue of our contemporary, *The Hospitals and Charities Illustrated*: "On one occasion when the visiting physician entered a hospital ward, followed by his crowd of students, he saw a new case waiting him—a little shrivelled up bit of a skeleton of a baby only a few months old. The physician turned to one of his students, 'Smith, wait and examine the child and tell me when I return what you believe to be the cause of "wasting,"' said the physician and passed on. When he returned the eager student anxiously awaited the 'Well?' 'Oh, please, sir,' he replied, 'I have found out what is wrong with this baby; it has *got no teeth!*'"

THORNE DEFENCE FUND.

To the Editors of THE LANCET.

SIRS,—We shall be obliged if you will kindly insert in your journal the second list of subscriptions to the above fund.

We are, Sirs, yours faithfully,

W. S. A. GRIFFITH, M.D. Cantab.,
WALTER TATE, M.D. Lond.,
DOUGLAS DREW, F.R.C.S. Eng.

P.S.—Dr. Tate of 32, Queen Anne-street, Cavendish-square, will be pleased to receive and to acknowledge any subscriptions.

	£	s.	d.
Amount previously subscribed	67	4	0
Mr. E. W. Roughton ...	1	1	0
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Dr. J. Dundas Grant ...	2	2	0

THE LATHINA DOOR-MAT.

THE Lathina door-mat consists of a frame of laths which are covered with a strong cocoa-nut fibre material. The spaces between the laths are a decided advantage as they allow the mud or dirt detached from the boot to fall beneath, leaving the mat practically unsoiled, besides which the boot may be more effectively cleaned, seeing that all parts of it may be brought into contact with the mat. Thus the sides of the boot may be rubbed as well as the sole and the heel. The mat may be reversed so that there are two "business sides" to it. The use of this mat promotes cleanliness, the dirt does not accumulate in the material, and is, on the contrary, deposited underneath whence it may be removed without giving rise to the offence occasioned by the shaking of the mat. The patentees are the Lathina Mat Company, Fleet, Hants.

PREDIGESTED FOODS.

To the Editors of THE LANCET.

SIRS,—So many cases exhibiting curious dyspeptic conditions have come under my notice recently that I should be glad to know whether other practitioners have met with similar cases which they might attribute, as I do, to the continual use of predigested foods. These foods have been advertised much of late and I have found that the functional stomachic atrophy that their long use involves brings about a dyspeptic state of a most recalcitrant kind, while the non-necessity for thorough mastication and salivary action tends to lead to other evils. The temporary good that often *seems* to arise from the taking of these foods constitutes one of their greatest dangers. Has any other medical man noted the above mentioned cause and effect?

I am, Sirs, yours faithfully,

June 20th, 1904. C. S. R.

THE MORPHINE HABIT IN RUSSIA.

A NOTE from Kharkoff to the *Norosti* states that amongst the educated classes of the community there is a great demand for morphine. In spite of the severe prohibition against its sale without a medical man's order the morphinomaniacs resort to all kinds of tricks to buy it at laboratories, druggists' shops, and other establishments.

Justitia.—We cannot answer without a full acquaintance with all the circumstances, but the issue of such a circular seems to us at any rate inadvisable, pending legal proceedings.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

Medical Diary for the ensuing Week.

OPERATIONS

METROPOLITAN HOSPITALS.

MONDAY (27th).—London (2 P.M.), St. Bartholomew's (1.30 P.M., St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9 30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.).

TUESDAY (28th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Central London Throat and Ear (2 P.M.).

WEDNESDAY (29th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

THURSDAY (30th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), St. Mark's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

FRIDAY (1st).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.). City Orthopædic (2.30 P.M.), Soho-square (2 P.M.), Central London Throat and Ear (2 P.M.).

SATURDAY (2nd).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.). Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (27th).—ODONTOLOGICAL SOCIETY OF GREAT BRITAIN (20, Hanover-square, W.).—7 P.M. Council. 8 P.M. Valedictory Address:—The President. Casual Communications:—Mr. V. Knowles will show: (1) A New Aseptic N_2O Stopcock; (2) A Device for Measuring Small Quantities of Liquid Anæsthetics.—Mr. E. Preedy: A Case of Irregular Eruption of Temporary Incisors.—Mr. J. F. Colyer: A Case showing Irregularity of the Lateral Incisors.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (27th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. T. C. Fox: Clinique. (Skin.) 5.15 P.M. Dr. H. Campbell: Observations on Diet.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Mr. Baldwin: Practical Surgery.

ST. PETER'S HOSPITAL (Henrietta-street, Covent Garden).—3.20 P.M. Mr. R. Harrison: Cases in the Wards.

TUESDAY (28th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Sir W. H. Broadbent: Clinique. (Medical.) 5.15 P.M. Sir Isambard Owen: Cardiac Failure.

POST-GRADUATE COLLEGE (Asylum for Idiots, Earlswood).—2.30 P.M. Dr. R. H. Cole: Idiocy and Imbecility.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury, W.C.).—3.30 P.M. Dr. Turner: Syphilitic Diseases of the Nervous System.

WEDNESDAY (29th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. C. Ryall: Clinique. (Surgical.) 5.15 P.M. Dr. D. Grant: Some Useful Appliances in the Treatment of Diseases of the Ear, Throat, and Nose.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Mr. Ll. Williams: Development of the Teeth.

UNIVERSITY COLLEGE (University of London) (Physiological Theatre).—5 P.M. Dr. W. P. May: Advanced Lectures on the Tracts of the Brain—Lecture IX.: Optic Nerve and its Connexions.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (Brompton).—4 P.M. Dr. S. Thompson: Chest Disease and Life Assurance.

THURSDAY (30th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. Hutchinson: Clinique. (Surgical.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Mr. Keetley: Hernia.

CHARING CROSS HOSPITAL.—4 P.M. Dr. Eden: Demonstration of Gynæcological Cases. (Post-Graduate Course.)

MOUNT VERNON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (7, Fitzroy-square, W.).—5 P.M. Dr. T. D. Lister: The Treatment of Asthma (illustrated by cases). (Post-Graduate Course.)

THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.).—4 P.M. Mr. Steward: Cases illustrating the Result of Surgical Treatment of Infantile Paralysis.

ST. PETER'S HOSPITAL (Henrietta-street, Covent Garden.)—3.30 P.M. Mr. J. Pardoe: Electric Illumination of the Urethra and Bladder (Urethroscopy, Cystoscopy).

NORTH-EAST LONDON POST-GRADUATE COLLEGE (Tottenham Hospital, N.).—4.30 P.M. Mr. A. de Prenderville: On the Induction of General Anæsthesia.

SAMARITAN FREE HOSPITAL FOR WOMEN (Marylebone-road, N.W.).—3 P.M. Dr. H. Bell: Inflammation of the Uterus.

FRIDAY (1st).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. J. Horne: Clinique. (Throat.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. R. J. Reece: Public Health.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury, W.C.).—3.30 P.M. Dr. Collier: Cerebral Diplegia.

EDITORIAL NOTICES.

It is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index and Title-page to Vol. I. of 1904, which is completed with the issue of to-day, will be given in the next number of THE LANCET.

VOLUMES AND CASES.

VOLUMES for the first half of the year 1904 will be ready shortly. Bound in cloth, gilt lettered, price 12*s.*, carriage extra.

Cases for binding the half-year's numbers are now ready. Cloth, gilt lettered, price 2*s.*, by post 2*s.* 3*d.*

To be obtained on application to the Manager, accompanied by remittance.

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Will Subscribers please note that only those subscriptions which are sent direct to the Proprietors of THE LANCET at their Offices, 423, Strand, W.C., are dealt with by them? Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c., should be sent to the Agent to whom the subscription is paid, and *not* to THE LANCET Offices.

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The Manager will be pleased to forward copies direct from the Offices to places abroad at the above rates, whatever be the weight of any of the copies so supplied. Address—THE MANAGER, THE LANCET OFFICES, 423, STRAND, LONDON, ENGLAND.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, June 23rd, 1904.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radiation in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks at 8.30 A.M.
June 17	30·07	S.W.	...	125	72	57	56	62	Cloudy
,, 18	30·01	W.	...	125	75	52	54	60	Cloudy
,, 19	30·10	W.	...	95	67	52	54	58	Overcast
,, 20	30·07	W.	...	118	71	56	56	61	Cloudy
,, 21	30·14	N.W.	...	104	65	52	54	60	Cloudy
,, 22	30·37	W.	...	118	73	53	54	61	Fine
,, 23	30·28	N.E.	...	117	69	53	55	62	Fine

During the week marked copies of the following newspapers have been received:—*Bradford Times, Bournemouth Daily Echo, Worthing Mercury, Madrid Herald, Weekly Record (West Indies), Port of Spain Gazette, Hertfordshire Mercury, Westminster Gazette, New Age, Daily News, Hyde Reporter, Reading Mercury, Local Government Chronicle, Liverpool Daily Post, Aberdeen Free Press, Ipswich Times, Coventry Herald, Windsor and Eton Express, Cardiff News, Surrey Advertiser, Birmingham Daily Mail, Literary Digest (New York), Scientific American (New York), &c.*

Communications, Letters, &c., have been received from—

A.—Mr. J. Albachary, Berlin; Dr. B. Anningson, Cambridge; American Agencies, Ltd., Lond.; Dr. T. Gelston Atkins, Cork; Messrs. Allen and Hanburys, Lond.; Mr. G. R. Anderson, Southport.

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Letters, each with enclosure, are also acknowledged from—

A.—Mr. F. H. Allen, Scunthorpe; Ashwood House, Dudley, Medical Superintendent of; A., Torquay; Association of Public Vaccinators, Lond., Secretary of; Aberystwyth Corporation, Borough Accountant of; A. D. J.

B.—Dr. W. H. Broad, Liverpool; Messrs. Brown and Pank, Lond.; Dr. J. F. Boa, Kildonan; Dr. J. B. Blaikie, Lond.; Mr. W. Bernard, Londonderry; Bristol Royal Hospital for Sick Children, Secretary of; Mr. G. C. Bell, Frinton-on-Sea; Messrs. Balch and Balch, Lond.

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